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THOMSON INTERNATIONAL, INC.

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

ASHLEIGH ANGELO, et al.,

Plaintiff(s),

v.

THOMSON INTERNATIONAL,
INCORPORATED, et al.,

Defendant(s).

Case No.: 1:21-cv-01609-JLT-CDB

**DECLARATION OF ROBERT SEEDS
SUPPORTING DEFENDANT'S MOTIONS
IN LIMINE NO. 1**

Date Action Filed: November 4, 2021
Trial Date: July 9, 2024

I, Robert Seeds, declare:

1. I am an attorney admitted to practice in this Court, and am employed by Greenan, Pepper, Sallander & Lally LLP, counsel for Thomson International in this matter. I submit this declaration to support all of Thomson's motions in .imine in this case. I can truthfully testify from my own personal knowledge as follows.

2. I have reviewed the medical records in Dr. Shulman's expert file for Erickson, Kahlie, Mena and Thompson. None of these records contains any kind of affidavit or declaration.

3. Plaintiffs' joint statement exhibit A lists a number of medical, health department and billing records for each of the plaintiffs. I have reviewed all of the designated records, which are listed below. None of the records includes or is accompanied by any declaration or affidavit

**DECLARATION OF ROBERT SEEDS SUPPORTING
DEFENDANT'S MOTIONS IN LIMINE NO. 1**

Case No.: 1:21-cv-01609-JLT-CDB

1 regarding the business records exception:
2

3 **Angelo, Ashleigh**

4 **Medical Records:**

- 5 • Henderson Hospital Records (PH PLAINTIFF ANGELO 1 – 555)
6 • Sunrise Hospital Records (PH PLAINTIFF ANGELO 556 – 590)
7 • Sunrise Hospital and Medical Center Records (PH PLAINTIFF ANGELO 729 – 956,
8 1620- 1627)
9 • Centennial Hills Hospital Records (PH PLAINTIFF ANGELO 957-979)
10 • Laboratory Medicine Consultants Records (PH PLAINTIFF ANGELO 980-981)
11 • Babylon Health Records (PH PLAINTIFF ANGELO 987-1024)
12 • CareNow Urgent Care – Green Valley & warm Springs Records (PH PLAINTIFF
13 ANGELO 1026-1050)
14 • Digestive Associates Records (PH PLAINTIFF ANGELO 1051-1065)
15 • P3 Health Records (PH PLAINTIFF ANGELO 1072-1173)
16 • Southwest Medical Associates Surgery Center Records (PH PLAINTIFF ANGELO
17 1174-1340)
18 • Urgent Care Sierra Heights Healthcare Center Records (PH PLAINTIFF ANGELO
19 1343-1431)
20 • Doctors Center Records (PH PLAINTIFF ANGELO 1628-1635)

21 **Bills**

- 22 • Henderson Hospital Bills (PH PLAINTIFF ANGELO 591-620)
23 • Sunrise Hospital Bills (PH PLAINTIFF ANGELO 621-650, 724-728)
24 • Babylon Health Bills (PH PLAINTIFF ANGELO 1025)
25 • Digestive Associates Bills (PH PLAINTIFF ANGELO 1066-1071)
26 • Southwest Medical Associates Surgery Center Bills (PH PLAINTIFF ANGELO 1341-
27 1342)
28 • Urgent Care Sierra Heights Healthcare Center Records (PH PLAINTIFF ANGELO

1600-1608)

- Southwest Medical Bills (PH PLAINTIFF ANGELO 1609-1613)

Public Health Records

- Southern Nevada Health Department Records (PH PLAINTIFF ANGELO 651-673)

Erickson, Amanda

Medical Records:

- Kalispell Regional Healthcare Records (PH PLAINTIFF ERICKSON 1 – 111)

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- MedNorth Kalispell Urgent Care Records (PH PLAINTIFF ERICKSON 112-140)

Bills:

- Kalispell Regional Healthcare Bills (PH PLAINTIFF ERICKSON 141-143)
- MedNorth Kalispell Urgent Care Bills (PH PLAINTIFF ERICKSON 144-145)
- Northwest Imaging Bills (PH PLAINTIFF ERICKSON 146-147)
- Walmart Pharmacy Receipt (PH PLAINTIFF ERICKSON 148)

Health Department Recs:

- Flathead County Health Department Records (PH PLAINTIFF ERICKSON 151-177)
- Montana Health Department Records (PH PLAINTIFF ERICKSON 178-190)

Kahlie, John

Medical Records

- St Charles Hospital Records (PH PLAINTIFF KAHLIE 1-53, 184, 218 – 273)

Bills:

- St Charles Hospital Bill (PH PLAINTIFF KAHLIE 54)

Health Department Recs:

- Oregon Health Department Records (PH PLAINTIFF KAHLIE 55-800)
- Deschutes County Public Health Records (PH PLAINTIFF KAHLIE 81-106)

Mena, Jose

Medical Records:

- McKenzie County Rural Clinic Records (PH PLAINTIFF MENA 1-277)
- Sanford Health Records (PH PLAINTIFF MENA 278-304, 334-424)

Bills:

- McKenzie County Rural Clinic Bills (PH PLAINTIFF MENA 425-431)

Health Department Recs:

- North Dakota Health Department Records (PH PLAINTIFF MENA 432-438)

Mitchell, Linda

Medical Records:

- Bryn Mawr Hospital Records (PH PLAINTIFF MITCHELL 1 – 360; 535-1058)
- Main Line Family Practice Records (PH PLAINTIFF MITCHELL 361-375; 389-410; 413-422; 437-445)
- Bryn Mawr Specialist Association Records (PH PLAINTIFF MITCHELL 1094-1135; 1143-1154; 1175-1253)
- Bryn Mawr Hospital Infectious Disease records (PH PLAINTIFF MITCHELL NEW 1727 - 2247) (Old Bates PH PLAINTIFF MITCHELL 1727-2247)

Bills:

- Bryn Mawr Hospital Bills (PH PLAINTIFF MITCHELL 457-471)
- Main Line Family Practice Bills (PH PLAINTIFF MITCHELL 472 – 474)
- Sav-On Pharmacy Prescription Receipt (PH PLAINTIFF MITCHELL 531)
- Bryn Mawr Hospital Infectious Disease Bills (PH PLAINTIFF MITCHELL 1169)
- Bryn Mawr Specialist Bills (PH PLAINTIFF MITCHELL NEW 1283-1291) (Old Bates PH PLAINTIFF MITCHELL 1183 – 1191)

Health Department Recs:

- Pennsylvania Health Department Records (PH PLAINTIFF MITCHELL 475-526)¹

¹ Questionnaire omits both id numbers. Investigation summary has her name but no numbers, and does not say that she had Newport merely that she was a “confirmed case”. Multiple hearsay. Test results do not include Newport. Does not include line list.

Thompson, James

Records:

- Legacy Salmon Creek Records (PH PLAINTIFF THOMPSON 1-40)
- Cascade Park Medical Office Records (PH PLAINTIFF THOMPSON 2689-2765)
- Sunnybrook Surgery Center Records (PH PLAINTIFF THOMPSON 2781-2891)
- Kaiser Permanente (Sunnybrook, Orchard, and Salmon Creek locations) Records (PH PLAINTIFF THOMPSON 2909-3147)
- Kaiser Permanente (Advanced Gastroenterology) Records (PH PLAINTIFF THOMPSON 3148- 3367)
- North County EMS Records (PH PLAINTIFF THOMPSON 3369-3370, 3372 – 3379)

Bills:

- Legacy Salmon Creek Bills (PH PLAINTIFF THOMPSON 41-45)
- Cascade Park Medical Office and Sunnyside Medical Center Bills (PH PLAINTIFF THOMPSON 2766-2780)
- Kaiser Permanente Bills (PH PLAINTIFF THOMPSON 2892 – 2908, 3380-3397)
- North County EMS Records (PH PLAINTIFF THOMPSON 3368, 3371)

Health Department Recs:

- Oregon Health Department Records (PH PLAINTIFF THOMPSON 46-55)
- Washington State Health Department Records (PH PLAINTIFF THOMPSON 56-2620)
- Clark County Health Department Records (PH PLAINTIFF THOMPSON 2621 – 2667)

4. Exhibit 1 is a true and correct copy of pages 9, 20, 21, and 26 – 28 of the deposition taken of Frank Yiannis in this case.

5. Exhibit 2 is a true and correct copy of 166 pages my office received after making a Freedom of Information Act request to the FDA. We received the same 166 pages many times in response to such requests. Exhibit 3 is a true and correct copy of the cover letter that accompanied one of them.

6. I have reviewed the 166 pages produced by the FDA pursuant to our Freedom of

1 Information Act request for information regarding its investigation of Salmonella Newport. It
 2 contains no records of emails or other communications between FDA employees, or its
 3 employees and any other governmental investigators. It does contain a document that we call the
 4 CORE report. I have counted more than 50 redactions in that 17 page report. I see in it no fact
 5 that supports the FDA conclusion that Thomson red onions were the source of infection for the
 6 Salmonella outbreak. It contains no communications between the FDA and the state agencies it
 7 worked with on the investigation. It purports to trace the infection back to Thomson through
 8 Sysco and Onions 52, but it contains no evidence, and no finding, that Thomson was the only
 9 source of onions for Sysco or Onions 52 during the relevant time period. Finally nothing in it
 10 indicates that that Onions 52's location was inspected or any samples taken and tested. Exhibit 2
 11 contains an FDA Traceback Investigation Summary. In its 21 pages, I have counted at least 226
 12 redactions that obscure the identities of every entity on its traceback diagrams except 3:
 13 Thomson, Onions 52 and Fresh Point.

14 7. I have reviewed the report titled *Salmonella* Newport/Red onion/Jul 2020
 15 Traceback Investigation Summary that is found in the FDA FOIA response. It begins with 21
 16 pages of narrative in which I have counted at least 226 redactions that conceal virtually all of the
 17 evidence the FDA relied on. The FDA production includes a Master Traceback diagram, but it
 18 does not appear to include the other attachments that are identified at the end of it.

19 8. I have reviewed over 2000 pages of California Department of Public Health
 20 records produced by plaintiff Austin in this case. Exhibit 4 is a true and correct copy of a heavily
 21 redacted email exchange that occurred as part of its investigation of the 2020 Salmonella
 22 outbreak. Exhibit 5 is a true and correct copy of some 239 pages of invoices, bills of lading and
 23 the like that the CDPH gathered in its effort to trace illnesses to their sources. Exhibit 6 is a true
 24 and correct copy of an internal CDPH email dated July 31, 2020, the day that Thomson decided
 25 to recall all its onions; one of plaintiffs' witnesses, Brandon Adcock is a recipient of this almost
 26 completely redacted email; this shows we will be hampered in cross-examining him if he testifies
 27 at trial. Exhibit 7 is a true and correct copy of documents I extracted from this production of
 28

1 CDPH records to provide examples of the redactions in the California records.

2 9. The Marler Clark firm produced to us documents that appear to be records that the
3 State of Michigan produced to the firm under its Freedom of Information Act. In the cover letter
4 of its 1172 page production. Michigan stated that it was producing “All non-exempt records
5 pertaining to the Salmonella Newport outbreak in 2020, including Traceback information into
6 the exposures and suspected sources identified for this outbreak.” The letter goes on to tell us
7 what Michigan would not disclose:

8 Pursuant to the federal FOIA statute, redactions have been made by FDA in the enclosed
9 records for confidential commercial information, trade secret information, and personal
10 privacy information.

11 Furthermore, draft documents completed prior to a final report, deliberative
12 communications made prior to the final agency determination, are denied as it is exempt
13 from disclosure under FOIA, MCL 15.243 Section 13(1)(m), which states
14 communications and notes within a public body of an advisory nature to the extent that
15 they cover other than purely factual materials and are preliminary to a final agency
16 determination of policy or action.

17 10. Exhibit 8 is a true and correct copy of the After Action Report that is exhibit 14
18 on plaintiff’s list.

19 11. Plaintiffs have produced over 2000 pages of documents regarding the Canadian
20 investigation. We have not attached them as an exhibit but if the Court asks we will provide a
21 copy. The Public Health Agency of Canada maintains on its website some records regarding its
22 investigation of the outbreak. Exhibit 9 is a true and correct copy of a document showing the
23 state of its investigation as of July 30, 2020.

24 12. Plaintiff Austin produced over 1000 pages of documents that related to the
25 Canadian investigation. Among the documents in this compilation is an Issue Detail Report
26 numbered 97199 that is identified in this production as a major document relating to the
27 *Salmonella* investigation. Exhibit 10 is a true and correct copy of that document, which I have
28 reviewed in detail. It sheds little light on how the Canadian investigators concluded that
Thomson onions were responsible for the alleged outbreak. It largely concerns the recall – its
title is SALMONELLA NEWPORT IN ONIONS (THOMSON INTERNATIONAL, US
RECALL) -SYSCO CANADA INC. – and its first 50 pages describe the scope of the recall, not

1 the traceback. After those 50 pages there are two pages that have redactions. Following those are
 2 6 pages that look like some sort of time sheets, after which pages 58 - 126 describe the traceback.
 3 Of these 69 pages, at least 54 contain redactions, redacting the identities of contact persons and
 4 customers who received onions from Sysco. For instance, Page number 60 states that Sysco
 5 identified Freshpoint as having supplied “the onions of concern” for some patients That page
 6 also shows the investigators learned that “Freshpoint identified [redacted] and Thomson
 7 International” as the growers/shippers of the product. Later on the same page the identities of
 8 two importers of record are redacted. These redactions leave open the possibility that some
 9 supplier other than Thomson supplied infected onions to sick people, contradicting the final
 10 conclusion that Thomson was the only source of onions infected with the outbreak strain of
 11 *Salmonella* Newport. Following this, pages 127 to 152 concern the recall and are not redacted.
 12 The balance of the file is mixed, with some redactions, including page 158, where the redactions
 13 conceal the identity of a source of *Salmonella* Newport-contaminated onions where the traceback
 14 excluded Thomson as the source

15 13. Exhibit 11 is a true and correct copy of another Issue Detail Report from that
 16 production. I have reviewed this document and have determined that at least 72 of its 111 pages
 17 contain one or multiple redactions.

18 14. Exhibit 12 is a true and correct copy of pages 100 and 108 of the deposition taken
 19 of Ernest Julian in this case.

20 15. Exhibit 13 is a true and correct copy of pages 26 – 28 of the deposition of Frank
 21 Yiannis.

22 16. I have reviewed the public health and other records produced by these plaintiffs. I
 23 have found actual laboratory reports, showing that the plaintiff tested positive for *Salmonella*
 24 Newport, only for Ashley Angelo, John Kahlie, and James Thompson. Exhibit 14 collects true
 25 and correct copies of their reports.

26 17. Exhibit 15 collects true and correct copies of Washington State lab reports for
 27 tests for *Salmonella* Newport that we have obtained in this case. Every Washington State lab
 28

1 report we have seen contains the following warning:

2
3 DISCLAIMER: This test was adopted and its performance characteristics
4 determined by the WA State PHL. It has not been approved by the FDA. Results
5 are for infection control and epidemiological purposes and should not be used as
6 the sole means for clinical diagnosis or patient management

7 18. Ashley Angelo's Lab Report, purportedly issued by the Southern Nevada Health
8 District Laboratory System, appears in a document production numbered PH PLAINTIFF
9 ANGELO 000001 – 714. Page 672. I have reviewed that production. It includes no affidavit
10 addressing the business records status of any of its pages.

11 19. John Kahlie's Lab Report, purportedly issued by the Oregon State Public Health
12 Laboratory, appears in his Initial Disclosure document production numbered PH PLAINTIFF
13 KAHLIE 000055 – 000144. I have reviewed that entire production. It contains no document that
14 is under penalty of perjury, and nothing that contains the information needed to satisfy the
15 business records exception. His document production includes a file bates numbered as PH
16 PLAINTIFF 000001-002065. I have reviewed that production. It includes no affidavit or
17 declaration that is under penalty of perjury.

18 20. James Thompson's lab report, produced as TII000059642 to 60697, purporting to
19 have been issued by the Oregon State Public Health Laboratory, was obtained by office via a
20 document subpoena by Compex, an attorney services vendor. Its 1056 page production includes
21 no affidavit or other document showing that any of the production is admissible as a business
22 record.

23 21. Exhibit 16 is a true and correct copy of pages 674 to 714 of a document
24 production by Ashley Angelo, PH PLAINTIFF ANGELO 000001 - PH PLAINTIFF ANGELO
25 000714 (2).pdf

26 22. Exhibit 17 is a true and correct copy of pages 107 to 142 of a document
27 production by John Kahlie, PH PLAINTIFF KAHLIE 000001 - PH PLAINTIFF KAHLIE
28 000144.

29 23. Plaintiff Austin, now deceased and dismissed from this case, produced 1144
30 pages of Washington State Department of Health General Outbreak Records. Exhibit 18 is a true

1 and correct copy of the first 18 pages of those records, which is a printout from the CDC line list
2 that shows only confirmed cases from the State of Washington, where Austin resided. Austin is
3 case number 89 on that list.

4 24. That same production of Washington State Department of Health General
5 Outbreak Records contains another 3 page line list. Exhibit 18a is a true and correct copy of the
6 that list is a printout from the CDC line list that shows only confirmed cases from the State of
7 Washington, where Austin resided. His name appears on the second page of the exhibit,
8 unredacted..

9 25. Exhibit 19 is a true and correct copy of the document titled "Investigation Report:
10 Factors Potentially Contributing to the Contamination of Red Onions Implicated in the Summer
11 2020 Outbreak of *Salmonella* Newport".

12 26. Exhibit 20 is a true and correct copy of the document titled "FDA Issues Report
13 Highlighting Salmonella Outbreak in Red Onions" found at [https://www.fda.gov/food/cfsan-](https://www.fda.gov/food/cfsan-constituent-updates/fda-issues-report-highlighting-salmonella-outbreak-red-onions)
14 constituent-updates/fda-issues-report-highlighting-salmonella-outbreak-red-onions

15 27. In this case there is a dispute over whether Ashley Angelo has pancreatitis and if
16 so what caused it. Exhibit 21 is a true and correct copy of an excerpt from 641 pages of medical
17 records that plaintiff Angelo produced in September 2023. It shows her repeating to an urgent
18 care clinic that she had been diagnosed with pancreatitis.

19 28. Exhibit 22 is a true and correct copy of the cover letter to the Michigan FOIA
20 response produced by the Marler firm when it was in this case. That production exceeded 1000
21 pages.

22 29. Exhibit 23 is a true and correct copy of an email exchange I had with plaintiffs'
23 counsel meeting and conferring regarding motions in limine. We subsequently had a phone
24 conversation regarding the items listed. For the most part, we agreed to disagree. We reached
25 agreement regarding evidence of insurance and of Thomson's financial condition. Plaintiffs
26 agreed to use only one of the four experts retained by the Marler firm. As for recalls, plaintiffs
27 agreed not to use such evidence unless they believed that Thomson had opened the door to the
28

1 exceptions. Exhibit 24 is a true and correct copy of an email that I subsequently sent to him
2 regarding a procedure for implementing that agreement. As of this writing I have not heard from
3 him regarding this, so we are filing a motion in limine arguing for a procedure.

4 I declare under penalty of perjury under California and Federal law that the foregoing is
5 true and correct. Executed on June 4, 2024 in Contra Costa County, California.
6

7 *Robert Seeds*

8 Robert Seeds, declarant
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EXHIBIT 1

SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF SAN DIEGO

KEITH ROBERT WILLIS,

Plaintiff,

vs.

THOMSON INTERNATIONAL,
INCORPORATED, a California
Corporation; DOES 1-10,
inclusive; ROE ENTITIES 1-10,
inclusive,

Defendants.

_____ /

AND RELATED CROSS-ACTION

VIDEOCONFERENCE DEPOSITION OF FRANK YIANNAS, MPH

Taken remotely before LORI A. YOCK, CSR, RPR

Certified Shorthand Reporter No. 5801

State of California

Monday, July 31, 2023

**CERTIFIED
TRANSCRIPT**

Case No.
37-2020-00027164-
CU-PL-CTL

1 **Q. Can you give me an estimate?**

2 A. I would be guessing, but we can go back and
3 look at the outbreak table that the FDA publishes in a
4 transparent manner for the public and see how many
5 outbreaks the FDA was reporting at that time. We can
6 get that number with precision.

7 **Q. Okay. So is it a number like five or 500?**

8 A. Oh, no. It's never 500, thank goodness for
9 that. But I would say in the summer months it could
10 range from five to ten outbreak investigations going on
11 at any given time.

12 **Q. All right. Now, based on your description, I'm**
13 **thinking that you are the most senior person at the FDA**
14 **who was involved in the Salmonella Newport outbreak in**
15 **2020 --**

16 A. Yes, that would be correct.

17 **Q. How many people reported directly to you on**
18 **the -- and let me just back up a second. I don't want to**
19 **have to keep saying the long name. So can I just call it**
20 **the outbreak?**

21 A. Sure. We'll know you are talking about this
22 one.

23 **Q. Yes. So how many people reported to you about**
24 **the outbreak investigation?**

25 A. Well, in terms of reporting structure, that

1 to keep investigating at all?

2 A. It doesn't have to, but -- there's no legal
3 definition that says that, you know, FDA, you have to.
4 But I think that's clearly what is expected from a
5 public health agency is to try to understand why this
6 happened. Again, to use an analogy, as in an airplane
7 disaster, people want to investigate why it happened to
8 see if we can prevent these things from happening again.

9 And so while the FDA is always pressured with
10 too much work to do and limited resources, I can tell
11 you outbreak investigations are a pretty high priority
12 because of that nature. So during my tenure, we pushed
13 very hard to say when outbreaks happen it's not enough
14 to respond and simply remove contaminated product from
15 the market. We need to understand why they occurred and
16 try to prevent them from happening in the first place.
17 And I will tell you, if you talk to congressional
18 leaders, which I have many times, that's the
19 expectation, too, is, you know, how do we prevent these
20 things from happening. So let's just not remove
21 contaminated product from the marketplace.

22 Q. Is there any leg of the FDA's outbreak
23 investigation that is intended to impose liability on
24 anyone?

25 A. No. The outbreak investigation isn't what I

1 document it. But I think really you're going to spend a
2 lot of time asking questions that aren't really that
3 relevant. The truth of the matter is the FDA document
4 outlines the four distributors; they name them. And if
5 you ask Onions 52, the shipments of onions from Thomson
6 to those four distributors they did not handle. I am
7 fully prepared to tell you how I know with confidence
8 that Distributor D linked to those points of service,
9 but we're arguing for something that isn't really
10 substantial or material. You just need me to show you
11 the paper trail.

12 But that's how you do it. You see the clusters
13 of cases, you see the illnesses, you know what
14 distributor, and you can easily deduce which points of
15 the boxes they're in there. That's the methodology. I
16 think it's clear as day. You might want to spend two
17 hours talking about it, but it is what it is, Bob. It's
18 undeniable.

19 Q. Well, that's your testimony, and I get that.
20 And I get that you're advocating a position, and I'm not
21 debating with you. I want to understand how you got
22 there, and I'm entitled to do that. So let me go here.

23 You told me in your prior deposition that this
24 traceback concerned red onions, correct?

25 A. Yes.

1 A. Yes, sir.

2 Q. Is there anything there that tells you that the
3 red onions did not pass through Onions 52?

4 A. That the red onions did not pass through. No,
5 the fact that the FDA was tracing forward these
6 particular lots told me that they knew they were red
7 onions. To me it's just a function of they didn't
8 document it here in their summary, but you can see,
9 trace forward where they were tracking was those jumbo
10 red onions.

11 Q. I'm not -- I'm not questioning that it's red
12 onions. I'm trying to understand now that Minkus was
13 distributing red onions --

14 A. From Thomson. That they originally received
15 through Thomson through a business dealing with
16 Onions 52.

17 Q. That's the next part I'm going to. So it's
18 your testimony, as I understand it, that you have data
19 that says that the red onions that Minkus was handling
20 went to Minkus directly from Thomson without passing
21 through Onions 52.

22 A. That's correct.

23 Q. And I'm trying to find out where that fact is.
24 It may not be in this document.

25 A. It's not in this document. It will have to be

1 through the packing slips and the business transactions
2 that occurred. But those records exist. What we're
3 doing ultimately, Bob, is we're trying to summarize the
4 chain of custody in a word document here. And sometimes
5 when people are documenting this, they're leaving out
6 words that you and I might have wished they would have
7 put in there. We wish they would have put "red onions"
8 in there. But I think to satisfy you, it seems like at
9 the end of the day you're going to have to see all these
10 packing slips and invoices and bills of lading lined up
11 so you can see the chain of custody and the documents in
12 which these documents that we're reviewing were dropped.

13 Q. Have you seen all those documents and bills of
14 lading lined up?

15 A. No. I never saw those documents Bob, when I
16 was deputy commissioner because there were a lot of
17 documents, but I relied on the summaries that the FDA
18 CORE team did. But those documents would exist, and FDA
19 would have seen them and have them in their database.
20 And the documents will exist in the entities as well,
21 whether it's Onions 52 or Thomson or Minkus Family Farm,
22 if they kept them. They certainly existed at the time
23 of the investigation.

24 Q. Okay. So what is the information then that you
25 saw -- and maybe you didn't see any -- that supports

1 your statement that these red onions did not pass
2 through Onions 52?

3 A. There were conversations that were had with
4 Onions 52. And I will work through Marler and Clark to
5 say that they -- to make sure that we get to see the
6 chain of custody. But they're based on verbals at this
7 point.

8 Q. Did you participate in those conversations?

9 A. In this one I didn't. I have participated in
10 some conversations with Onions 52, but in this
11 particular case, verifying that the conclusions on this
12 diagram -- the question -- the big question that I had,
13 and Marler Clark was able to answer it through
14 conversations with Onions 52, for these transactions
15 with these distributors, did they take possession of
16 them. And the answer is no.

17 Q. I'm going to show you my screen. I'm showing
18 you an email from Joseph Bermudez to Jenny Schell dated
19 Wednesday, 10-25-2023.

20 A. Yes.

21 Q. Is that what you're referring to?

22 A. I suspect this is the conversation that was had
23 between Marler Clark and Joseph Bermudez, who I've
24 talked to in the past, yeah. I'm trying to read it
25 here: CFO confirmed that shipments directly from --

1 CERTIFICATE OF REPORTER

2

3 I, LORI A. YOCK, CSR No. 5801, a Certified
4 Shorthand Reporter in and for the State of California,
5 do hereby certify:

6 That prior to being examined, the witness named
7 in the foregoing deposition was by me duly sworn to
8 testify to the truth, the whole truth, and nothing but
9 the truth.

10 That said deposition was taken before me via
11 video conference at the time set forth and was taken
12 down by me in shorthand and thereafter reduced to
13 computerized transcription under my direction and
14 supervision, and I hereby certify the foregoing
15 deposition is a full, true and correct transcript of my
16 shorthand notes so taken.

17 And I further certify that I am neither counsel
18 for nor related to any party to said action nor in any
19 way interested in the outcome thereof.

20 IN WITNESS WHEREOF, I have hereunto subscribed
21 my name this 11th day of August, 2023.

22

23

24

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LORI A. YOCK
CSR No. 5801

EXHIBIT 2



Salmonella Newport/Red Onion/Jul 2020

EON # 432687

Incident Summary Report

11/3/20

Authors:

CORE Signals & Surveillance Team: Tyann Blessington, PhD, MS, MPH

CORE Response Team (3): Evelyn Pereira, MPH

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ABSTRACT

On 7/13/20, after receiving notification from PulseNet, FDA CORE Signals began evaluating a cluster of 134 *Salmonella* Newport illnesses from 16 states [CA (3), IA (3), IL (1), MI (13), MN (3), MO (2), MT (11), NC (3), OH (5), OR (42), SD (8), TN (1), UT (28), WA (1), WI (1), WY (9)]. Canadian health authorities reported one clinical isolate matching the genetic sequence of this cluster. At the time of transfer, epidemiologic information was unable to identify a single suspect vehicle. Vehicles of interest included: tomatoes, cilantro, onions, and peppers. The traceback investigation was narrowed to red onions based on the findings of the Canadian outbreak investigation which identified red onions from Thomson International Inc. (Bakersfield, CA) as the likely source of Canadian illnesses. FDA's traceback investigation identified Thomson International Inc. (Bakersfield, CA) as the source of red onions to ten US POS where ill people reported exposure prior to becoming ill. On 8/1/20, Thomson International Inc. (Bakersfield, CA) initiated a recall of red, yellow, white, and sweet yellow onions. A total of 113 samples were collected by FDA during investigations at Thomson International, Inc (Bakersfield, CA) or targeted sampling at distribution centers. Ten samples (4 sediment, 1 scat and 5 ultrafiltration water samples) were reported positive for *Salmonella* but did not match the outbreak strain. The vehicle for this outbreak was confirmed as red onions based on the epidemiologic and traceback evidence. At the conclusion of the CORE Response phase, a total of 1132 cases in 48 states [AK (25), AL (2), AR (2), AZ (39), CA (128), CO (32), CT (2), DE (2), FL (8), GA (11), HI (3), ID (43), IL (54), IN (4), IA (31), KS (3), KY (3), ME (6), MA (2), MD (7), MI (47), MN (19), MO (11), MS (5), MT (72), NC (6), ND (9), NE (10), NH (1), NJ (12), NM (3), NV (14), NY (14), OH (11), OK (1), OR (110), PA (27), RI (3), SC (1), SD (24), TN (7), TX (2), UT (115), VA (10), WA (150), WI (11), WV (3), WY (27)] and 515 Canadian cases in 7 Canadian provinces were associated with this outbreak.

SIGNALS AND SURVEILLANCE ACTIVITIES

On 7/10/20, PulseNet users were notified of a national cluster of *Salmonella* Newport illnesses, that were genetically related to historical almond isolates and a historical Newport cluster. On 7/13/20, CORE Signals and CDC discussed the emerging outbreak and the cluster's relationship to historical isolates. The cluster rapidly expanded and at the time of transfer on 7/21/20, there were 134 cases across 16 states: CA (3), IA (3), IL (1), MI (13), MN (3), MO (2), MT (11), NC (3), OH (5), OR (42), SD (8), TN (1), UT (28), WA (1), WI (1), WY (9). Most illnesses were geographically focused within the central, midwestern, and western states. Isolation dates ranged from 6/20/20 to 7/11/20, and available onset dates (n=42) ranged from 6/19/20 to 7/7/20. The cases ranged in age from 2 to 92 (median = 40) years, and 55% of cases were female. Twenty-four cases were hospitalized, and there were no deaths. At the time of transfer, the outbreak was considered to be ongoing and was expected to expand

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due to a 16-day lag time (the time between illness onset and laboratory confirmation).

The genetic sequences of the cluster isolates for the outbreak cluster 2007MLJJP-1 were considered highly related by 0-4 alleles and 0-6 SNPs. Additionally, Canadian health authorities reported one clinical isolate matching the genetic sequence of this cluster. Of historical note, the isolates for outbreak cluster 2007MLJJP-1 were within five alleles or 11 SNPs of isolates from the outbreak cluster, 1509MLJJP-1, which closed without an identified vehicle. In addition, NCBI's Pathogen Detection Pipeline identified historical clinical isolates from the United Kingdom as well as CA almonds (raw almond samples collected in 2016 and 2017) that were within 14 SNPs from this cluster. The nut samples were collected under a blinded sampling assignment with a contract laboratory and the associated firm and branding information were not available.

CDC hosted States calls on 7/15/20 and 7/20/20 and cases reported multiple common exposures including, fresh produce (tomatoes, cilantro, onions, and leafy greens), eggs, cheese, beef, chicken, and pork. Tree nuts were rarely reported (3/25 cases). State investigators decided to interview a select few existing and new cases with a modified National Hypothesis Generating Questionnaire (NHGQ). The only food items that were significant ($\alpha = 0.05$) when compared to the FoodNet Population Survey were cilantro and leafy greens. Cases across several states reported consuming foods from Mexican-style and sandwich-style restaurants. Nationally, 6 cases reported Subway, 3 reported Jersey Mike's, and 2 reported Jimmy John's. Many state partners reported an increase and/or backlog of *Salmonella* Newport or *Salmonella* isolates pending further characterization in their laboratories.

Eight restaurant and facility subclusters were identified in CA and OR.

- The California Department of Public Health investigated 5 Mexican-style restaurant sub-clusters all located in the Northern CA region and all part of a larger *Salmonella* serogroup C outbreak investigation. The 5 subcluster locations and their subcluster identifications are listed below. At the time of transfer, most illness isolates were pending WGS, therefore it was unknown if these illnesses were related by WGS or epi-linked to the Newport cluster, 2007MLJJP-1. Two 2007MLJJP-1 cluster isolates, CA__M20X01046 and CA__M20X01079, were associated with CA subcluster 1 and 2, respectively. The remaining isolates associated with the CA clusters were not sequenced by the time of transfer. All serogroup C outbreak cases were residents of Northern CA and most were from the San Francisco Bay area. Most cases reported consuming fresh produce as part of their meal or as an ingredient in salsa and pico de gallo. Identified meal dates ranged from 6/16/20 to 7/7/20. State investigators requested the restaurants to

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provide lists of ingredients (including dried spices and seasonings) used to make pico de gallo, salsas, and guacamole. Invoices for produce (including cilantro and tomatoes) were requested for all restaurants. Cilantro and tomatoes were the items of greatest

- o (CA-01),
- o (CA-02),
- o (CA-03),
- o (CA-04),
- o (CA-05),

(b) (4)

- Oregon Health Authority investigated 3 subclusters; 2 were associated with restaurants (Mexican-style and Subway) and the 3rd was associated with an assisted living center. The 3 subcluster locations and their subcluster identifications are listed below. Identified meal dates ranged from 6/25/20 to 7/7/20. On 7/17/20, Josephine County Public Health issued a public notice of their investigation for subcluster OR-01. Product samples of cilantro (OR-01), onion (OR-02), and tomato (OR-01, OR-02, and OR-03) were collected from the points-of-service for microbiological analysis. All were negative.

- o (OR-01),
- o (OR-02),

(b) (4)

(b) (4)

- o (OR-03), Subway (various locations)

At the time of transfer, microbiological and epidemiological information were unable to identify a single suspect vehicle. CDC believed the vehicle was likely an FDA-regulated food product; tomatoes, cilantro, onions, and peppers were items of greatest interest. Supplier review and traceback evaluation were needed to identify common suppliers and aid in the evaluation of the vehicle items of interest. CDC was preparing a web-based public notice about this outbreak and investigation at the time of transfer.

This incident was transferred from CORE Signals to CORE Response Team 3 on 7/21/20 based on the following rationale:

- 1) This was a rapidly expanding multi-state outbreak likely associated with a FDA-regulated product; items of interest included tomatoes, cilantro, onions, and peppers.
- 2) Response coordination for traceback, sampling, product and firm actions, and communication was needed.

RESPONSE

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Epidemiology

A case was defined as a person with infection with *Salmonella* Newport with an isolate matching by cgMLST within 0-6 alleles and an illness onset on or after 6/15/20. This outbreak included 1132 cases from 48 states [AK (25), AL (2), AR (2), AZ (39), CA (128), CO (32), CT (2), DE (2), FL (8), GA (11), HI (3), ID (43), IL (54), IN (4), IA (31), KS (3), KY (3), ME (6), MA (2), MD (7), MI (47), MN (19), MO (11), MS (5), MT (72), NC (6), ND (9), NE (10), NH (1), NJ (12), NM (3), NV (14), NY (14), OH (11), OK (1), OR (110), PA (27), RI (3), SC (1), SD (24), TN (7), TX (2), UT (115), VA (10), WA (150), WI (11), WV (3), WY (27)]. Isolation dates ranged from 6/20/20 to 9/14/20, while confirmed reported onset dates ranged from 6/19/20 to 9/11/20. Ages ranged from 5 days to 102 years (median 41), and 58% of cases were female. Of the cases with information available, 167/705 (24%) were hospitalized, and there were no reported deaths. All isolates were closely related to each other at 0-6 alleles by cgMLST.

There were early signals for Mexican-style foods. Canada identified clinical cases caused by the same strain and noted red onions as a leading hypothesis in their investigation. Based on Canada's findings and preliminary review of traceback records, red onions were identified as the suspect vehicle.

From 380 returned questionnaires for the US outbreak, 344 (91%) ill people reported consuming onions or meals that likely contained onions. Of which, 66% of cases reported consuming red onions, or meals that likely contained red onions, 62% reported white onions, and 53% yellow onions. Some cases reported eating multiple onion varieties.

CDC closed this investigation as of 10/2/2020 with red onions as the confirmed vehicle of this outbreak.

The Public Health Agency of Canada declared the Canadian outbreak over on 9/25/20. At closeout, there were 515 confirmed cases of *Salmonella* Newport linked to this outbreak in the following provinces: British Columbia (121), Alberta (293), Saskatchewan (35), Manitoba (26), Ontario (14), Quebec (25) and Prince Edward Island (1). Seventy-nine of 419 individuals (79%) with information available were hospitalized. Three people died (deaths not attributed to *Salmonella*). Illnesses occurred between 6/15/20 (onset) to 8/28/20 (specimen collection date).

The CDC linelist and WGS tree are available on EON # [432687](#).

Traceback

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A regulatory traceback was initiated for four legs at (b) (4) points-of-service (POS) in response to this outbreak of *Salmonella* Newport illnesses. Four traceback legs representing 26 cases were initiated on 07/21/20. Factors used in identifying “best cases” were: more than one case at a single POS with exposures to red onions. Case patients included in the traceback investigation had known meal/exposure dates which ranged from 06/19/20 to 07/15/20. The timeframe of interest for record collection was identified as two weeks at POS for known meal dates and three weeks for onset dates.

Additional Traceback and Traceforward Information

The four legs of traceback were performed on the confirmed vehicle of red onions. Exposures to other colors of onions were identified by CDC and state partners. The California Department of Public Health (CDPH) and the Michigan Department of Agriculture & Rural Development (MDARD) performed traceback of yellow onions for (b) (4) points-of-service.

CDPH traced onions (red and yellow) from (b) (4) points-of service (POS). Thomson brand yellow onions were sourced from Onions 52 (Syracuse, UT) for (b) (4) of the (b) (4) POS. Additional yellow onion suppliers were identified for each of the (b) (4) POS. (b) (4) POS sourced yellow onions from (b) (4) (b) (4). The traceback for these legs was limited by recordkeeping, especially at the level of the suppliers to the points-of-service.

MDARD traced yellow onions from (b) (4) points-of-service. (b) (4) POS received yellow onions that were sourced solely from Thomson International (Bakersfield, CA) via Onions 52. (b) (4) POS sourced onions from (b) (4) including Thomson International (Bakersfield, CA) via Onions 52. (b) (4) POS received onions from (b) (4) but not Thomson International (Bakersfield, CA) or Onions 52 (Syracuse, UT).

Through the recall audit check procedures, traceforward information was obtained describing customer lists that received recalled onions. A traceforward product flow diagram was produced showing Thomson International Inc’s direct customers, as well as the supply chains for the four legs of red onion traceback, and the yellow onion tracebacks performed by the CDPH and the MDARD. The POS identified in the traceforward product flow diagram indicate if red and/or yellow onions sourced from Thomson International Inc were known to have been supplied at some time; this does not indicate if the onions were the onions that were consumed by the cases, just known distribution. Additional grocery companies identified in the recall audit check and downstream recalls included: ALDI, Food Lion, Giant Food, Hello Fresh, Imperfect Foods, Kroger, Publix Super Markets, Stop & Shop, Walmart, and WinCo.

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Traceback Conclusion

The traceback investigation identified four legs of distribution for red onions served at (b) (4) points-of-service. Thomson International Inc (Bakersfield, CA) was identified as the source of the red onions based on convergence of the legs of traceback.

Additional information from traceback investigations performed by CDPH and MDARD support this conclusion

Traceback Limitations

This traceback investigation was limited by the exposure information provided by cases in identified clusters, the size of illness clusters identified, limited supply chain diversity identified, and lack of adequate recordkeeping. Epidemiologic information regarding case exposures was limited when cases were unable to recall the type of onions consumed. The majority of the clusters, nine of ten, were less than four cases per point-of-service. Three of the four legs of red onion traceback were through various Sysco distribution centers and did represent a broader diversity of supply chains.

Records were not available or were incomplete at some points along the distribution chains: (b) (4) did not identify Sysco as a supplier, but later records from Sysco identified it as such; records at Thomson International Inc for field level information were known to be incorrect and information used in this traceback was the best information that the firm could identify.

The traceback summary, timeline and diagrams are available on EON # [432687](#).

Establishment Inspections and Investigations

Record Requests

On 7/24/20, CORE issued an information request to ORA HAF1E (NWE-DO) for traceback data from Subway Company (b) (4). The request was fulfilled on 7/30/20. Multiple, but not all, Subway locations identified by ill people were supplied onions from (b) (4); (b) (4). However, given that (b) (4) could not explain all the Subway exposures, no follow up was conducted at (b) (4).

On 7/27/20, CORE issued an assignment (eNSpect Assignment #167287) to ORA HAF3W (DAL-DO) for record collection at Sysco (b) (4), TX; FEI # (b) (4). The Sysco locations included in the US traceback investigation received onions from (b) (4).

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On 7/28/20, CORE issued an assignment (eNSpect Assignment #167509) to ORA HAF4W (DEN-DO) for record collection at Onions 52 Inc (Syracuse, UT; FEI #3016800010) related to the Canadian traceback investigation. Records were received on 7/29/20 and forwarded to Canadian partners for review. The assignment was closed out on 7/31/20.

On 7/28/20, CORE requested record collection by ORA HAF6W (SEA-DO) from (b) (4). Records were received on 7/28/20. (b) (4) received onions from (b) (4) suppliers. Due to lack of convergence on these suppliers, follow up was not conducted at these suppliers.

On 8/4/20, CORE issued an assignment (eNSpect #169871) to ORA HAF6E (CHI-DO) for record collection at (b) (4). This was a supplier of interest for a MI subcluster not supplied by Sysco (b) (4). Records were received on 8/6/20 and no additional follow up was initiated. The assignment was closed out on 8/12/20.

On 8/10/20, CORE issued an assignment (eNSpect #170684) to ORA HAF6E (CHI-DO) for record collection at (b) (4). (b) (4) received red onions from (b) (4) suppliers (b) (4) and (b) (4) which was subsequently supplied to one subcluster. Follow up at the identified suppliers was not initiated.

Targeted Sampling

On 8/19/20, CORE issued an assignment (FACTS# 12061015) to ORA HAF1E (NWE-DO) for product sampling at Sysco (b)(4), MA). Two samples were collected. The assignment was closed out on 8/24/20.

On 8/19/20, CORE issued an assignment (FACTS# 12061168) to ORA HAF1E (NYK-DO) for product sampling at Sysco (b)(4), NY). Eighteen samples were collected. The assignment was closed out on 8/25/20.

On 8/19/20, CORE issued an assignment (FACTS# 12061016) to ORA HAF3W (DAL-DO) for product sampling at Sysco (b)(4), TX). Two samples were collected.

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On 8/19/20, CORE issued an assignment (FACTS# 12061017) to ORA HAF4W (DEN-DO) for product sampling at Sysco (b) (4) (FEI (b) (4) ; (b)(4) , UT). Twenty-four samples were collected. The assignment was closed out on 8/25/20.

On 8/19/20, CORE issued an assignment (FACTS# 12061018) to ORA HAF6W (SEA-DO) for product sampling at Sysco (b) (4) (FEI # (b)(4) , OR). Sixteen samples were collected. The assignment was closed out on 8/21/20.

The samples that were collected consisted of red, white or yellow onions subject to recall by Thomson International, Inc. (Bakersfield, CA).

Investigations

CORE issued an assignment (FACTS #12055268) to ORA HAF5W (SAN-DO) for an inspection including record collection and environmental sampling at Thomson International Inc. (Bakersfield, CA; FEI #3004391505) on 8/2/20. The inspection was initiated on 8/3/20 by ORA HAF5W and the California Department of Food and Agriculture. The assignment was closed out on 8/5/20.

CORE issued an assignment (FACTS #12055297) to ORA OHAFO Domestic Produce Safety Branch (ORA PSN) for an investigation and sampling at Thomson International Inc. (Bakersfield, CA; FEI #3004391505) on 8/2/20. On 8/6/20, ORA PSN, California Department of Public Health and the California Department of Food and Agriculture initiated the investigation. Based on traceback records received from Thomson International Inc (Bakersfield, CA), CORE identified three fields [Thomson Gladestone (Glad E), R&G FLD 161, Thomson 32-1] in Bakersfield, CA and one field in Holtville, CA (Pepper 22), where the implicated lots were harvested. Investigators collected product, soil, water, environmental and sediment samples. A FDA-4056 was not issued for either investigation but a discussion was held with the firm to discuss the exclusion of pests, records management and cleaning and sanitizing procedures. The inspection was closed out on 8/27/20.

CORE issued an assignment (FACTS #12060391) to ORA OHAFO Domestic Produce Safety Branch (ORA PSN) for an investigation and water and environmental sampling at Thomson International Inc. (Bakersfield, CA; FEI #3004391505) growing fields and surrounding area in Holtville, CA on 8/18/20. One implicated lot included in the traceback was harvested from the Pepper 22A field in Holtville, CA. On 8/20/20, ORA PSN initiated the investigation. Investigators collected soil, water, environmental and sediment samples. A FDA-4056 was not issued. The inspection was closed out on 8/24/20.

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As a follow up to the first investigations, ORA PSN initiated investigations (FACTS # 12068471) at Thomson International Inc. (Bakersfield, CA; FEI #3004391505) fields in Bakersfield, CA and Holtville, CA fields. The investigations were coordinated through CFSAN Office of Compliance and Office of Food Safety.

Laboratory

A total of 113 samples were collected by FDA as part of this outbreak investigation. One hundred three samples were negative. Ten samples were positive for *Salmonella*.

Sysco (b)(4)

ORA Investigators from four ORA HAF Divisions [1E (NYK, NWE), 3W (DAL), 4W (DEN), 6W (SEA)] collected a total of 62 onions samples from (b)(4) Sysco (b)(4) :

(b) (4)

Twenty samples were analyzed at Northeast Food and Feed Laboratory (NFFL). Eighteen samples were analyzed at Pacific Southwest Food and Field Laboratory (PSFFL). Twenty-four samples were analyzed at Denver Laboratory (DENL).

The 62 samples collected from the Sysco (b)(4) were reported negative.

Thomson International Inc. (Bakersfield, CA) Investigations

During the inspection conducted by ORA HAF5W and the California Department of Food and Agriculture at Thomson International Inc. (Bakersfield, CA), three environmental (#1145759, 1145760, 1145761) samples and one scat sample (#1141449) were collected. Samples were analyzed at PSFFL and reported negative for *Salmonella*.

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Investigators collected twenty-two samples during the investigation conducted by ORA PSN at Thomson international Inc. (Bakersfield, CA). Fourteen onion samples (#1145947, 1145948, 1145625-29, 1145955, 1145956, 1146412-1146416), four water samples (#1145623, 1145624, 1145951, 1145953), one scat sample (#1145949) and three sediment samples (#1145950, 1145952, 1145954) were collected. The twenty-two samples were analyzed at NFFL and all were negative for *Salmonella*.

ORA PSN Investigators collected twenty-five samples during the investigation at the Thomson International, Inc (Bakersfield, CA) growing areas in Holtville, CA. Three environmental (#1137802, 1137803, 1137804) and 22 investigational [7 ultra-filtration water (#1146713, 1146714, 1146757, 1146791, 1146793, 1146796, 1146797), 2 grab water (#1146717, 1146753), 1 drag swab (1091981), 8 sediment (#1146712, 1146715, 1146716, 1146754-1146756, 1146792, 1146794), 3 soil/scat (1037805, 1146795, 1091980), onion wrappings (#1091982)] samples were collected. The seven water ultra-filtration samples were analyzed by CFSAN ORS. Eight of the twenty-five samples were analyzed at NFFL and the remaining ten samples were analyzed by PSFFL.

A total of 51 samples were collected during the investigations at Thomson International Inc. at Bakersfield, CA and Holtville, CA. Ten samples were positive for *Salmonella* and were collected from the Imperial Irrigation District areas surrounding the Thomson International Inc. fields in Holtville, CA. A summary of the positive samples and serotypes are included below:

- 4 sediment samples
 - #1146715 (S. Newport*; S. Illa 53:z4,z23:-)
 - #1146716 (S. Oranienburg**, S. Muenchen; Illa 41:z4,z23:-; Illa 53:z4,z23:-)
 - #1146754 (S. Newport*, S. Montevideo)
 - #1146755 (S. Montevideo)
- 5 ultrafiltration water samples
 - #1146713 (S. Newport*)
 - #1146714 (S. Newport*, S. Montevideo, S. enterica subspecies VI 44:z36[z38]:-)
 - #1146757 (S. Newport*, S. Montevideo, S. Thompson)
 - #1146791 (S. Newport*, S. Braenderup, S. Montevideo, S. Senftenberg, S. Thompson, S. Wangata)
 - #1146797 (S. Anatum, S. Taksony, S. Tennessee)
- 1 scat sample
 - #1146795 (S. Illa 41:z4,z23:-)

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* Does not match outbreak strain of *S. Newport*

** WGS unresolved due to abnormal genome size, sequence ran twice

WGS Analysis

A total of the 141 isolates were WGS analyzed from the ten positive samples. One isolate from sample #1146716 had an unresolved WGS analysis due to an abnormal genome size (~5.9 Mb). The remaining 140 isolates were found to belong to possibly 17 different *Salmonella* strains. Although *S. Newport* was isolated from six of the ten positive samples, none of the isolates were genetically related to the outbreak strain.

Of note, isolates from one sediment sample were genetically identical to one another, representing the same strain. It's possible that this strain was the same strain that caused the alfalfa sprout outbreak in 2016 (1601MLJ6-1).

Additionally, isolates from a different sediment sample were genetically related to each other and likely match clinical isolates from the 2018 sprout outbreak 1801MLJIX-1. Both the 2016 and 2018 sprouts outbreaks identified seed suppliers in or nearby Holtville, CA as firms of interest.

The FDA sample tracker and final WGS report is available on EON # [432687](#).

Product/Firm Actions/Firm Events

On 7/30/20, Sysco (b)(4), TX) initiated a recall of Imperial Fresh brand red onions imported into Canada from the US and distributed in Western Canada through the following Sysco locations: (b)(4). The onions were supplied by Thomson International, Inc (Bakersfield, CA).

On 7/31/20, Thomson International Inc. ceased operations at their Bakersfield, California facility and agreed to voluntarily recall onions. The recall was initiated on 8/1/20. Red, yellow, white, and sweet yellow onions produced by Thomson International and shipped from 5/1/20 through 8/1/20 were subject to recall.

As a result of the Thomson International Inc (Bakersfield, CA) recall, multiple firms initiated downstream recalls or posted notices on their respective websites including: Emerald Fruit & Produce Inc. (Eugene, OR), Giant Eagle (Pittsburgh, PA), Taylor Farms (Dallas, TX), Walmart (Bentonville, AR), Food Lion (Salisbury, NC), Publix Super Markets (Lakeland, FL), The Kroger Co. & subsidiaries [Smith's Food & Drug, Fry's Food Stores, Fred Meyer Stores, Kroger Delta Division, Kroger Mid Atlantic]

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(Cincinnati, OH), Progressive Produce LLC (La Mirada, CA), Spokane Produce (Spokane, WA), Hello Fresh (New York, NY), Imperfect Produce (San Francisco, CA).

FDA created a [majors recall page](#) to track downstream recalls.

COMMUNICATIONS

In the course of the investigation, firm calls were held with Sysco Merchandising and Supply (Houston, TX), Thomson International Inc. (Bakersfield, CA) and Onions 52 (Syracuse, UT) to discuss the outbreak, public communication and product actions.

FDA, CDC, PHAC and CFIA held an Industry Call on 7/31/20 to discuss public communications.

Thomson International Inc. (Bakersfield, CA) issued a [press release](#) for their recall on 8/1/20.

FDA issued [public communications](#) regarding this outbreak on 7/31/20. Subsequent updates were made on 7/31/20, 8/3/20, 8/7/20, 8/11/20, 8/13/20, 8/18/20, 9/1/20, 10/8/20.

CDC issued [public communications](#) regarding this outbreak on 7/24/20. Subsequent updates were made on 7/22/20, 7/24/20, 7/31/20, 8/3/20, 8/7/20, 8/18/20, 9/1/20, 10/8/20.

On 8/5/20, USDA FSIS issued a [Public Health Alert](#) regarding the recall of RTE meat and poultry products that contained recalled onions.

The Public Health Agency of Canada issued a [Public Health Notice](#) regarding this outbreak on 7/24/20. The Public Health notice was further updated on 7/30, 8/2/20, 8/7/20, 8/14/20, 8/21/20, 8/31/20, 9/14/20, 10/1/20.

A [Recall Notice](#) related to Sysco (b)(4), TX) was issued by CFIA on 7/30/20.

CFIA issued a [Recall Notice](#) for the Thomson International Inc. (Bakersfield, CA) recall on 8/1/20.

CONCLUSION

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As of 10/5/20, a total of 1132 illnesses were reported from 48 states, including 167 hospitalizations. A traceback investigation identified Thomson International Inc. (Bakersfield, CA) as the source of red onions to ten US POS where ill people reported eating prior to becoming ill. A total of sixty-two product samples were collected from (b) (4) Sysco Distribution Centers. Fifty-one samples were collected from investigations at Thomson International Inc facility and fields in Bakersfield, CA and Holtville, CA were collected. Of the total 113 samples collected, ten samples were reported positive for *Salmonella* but did not match the outbreak strain. Thomson International Inc. Bakersfield, CA) initiated a recall of red, white, yellow and sweet yellow onions on 8/1/20. Based on the epidemiologic and traceback evidence, red onions were confirmed as the vehicle of this *Salmonella* Newport outbreak.

ACKNOWLEDGEMENTS

CORE would like to acknowledge the work of ORA HAF5W, ORA Produce Safety Network, California Department of Public Health, and the California Department of Food and Agriculture for mobilizing and initiating the investigations at Thomson International Inc. quickly which contributed directly to the outbreak investigation. Additionally, we would like to acknowledge the laboratory staff within ORA's Pacific Southwest Food and Feed Laboratory and Northeast Food and Feed Laboratory for analyzing the samples collected during the investigations at Thomson International Inc. Many thanks to the State Partners in Arizona, California, Maryland, Michigan, Minnesota, Montana, North Dakota, Oregon and Wyoming that collected traceback records for the numerous subclusters identified. Your contributions to this outbreak investigation are appreciated.

INCIDENT COORDINATION GROUP

Incident Group List - *Salmonella* Newport/ Red Onion/ Jul 2020

Coordinated Outbreak Response and Evaluation Network

Signals & Surveillance: LCDR Tyann Blessington

Response: Response Team 3

- Lead Coordinator: Evelyn Pereira
- Operations: LCDR Matt Doyle
- Planning: Stranjae' Ivory

Outbreak Evaluation: Marie Armstrong

Communications: Corinne Newhart

Senior Leadership

| |
|---|
| Office of Regulatory Affairs (ORA) |
| Human and Animal Food East |

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| | |
|--|--|
| Division I – NYK-DO (New York), NWE-DO (New England) | Kim Langelo; Nikki Vaught |
| Division II – BLT-DO (Baltimore), PHI-DO (Philadelphia), NWJ-DO (New Jersey) | LCDR Valeria Moore, Judith Paterson, William Muszynski |
| Division III – ATL-DO (Atlanta) | Wilbur Huggins |
| Division IV – FLA-DO (Florida), SJN-DO (San Juan) | Nelson Venerio, Marianela Aponte Cruz |
| Division V – CIN-DO (Cincinnati), NOL-DO (New Orleans) | Brenda Zimmer, Lindsay Bertling |
| Division VI – CHI-DO (Chicago), DET-DO (Detroit) | Joseph Cooper |
| Human and Animal Food West | |
| Division I – MIN-DO (Minneapolis) | Heidi DeBeck Douglas (Doug) Snyder |
| Division II – KAN-DO (Kansas City) | Erin Dugan |
| Division III – DAL-DO (Dallas) | Jane Broussard, |
| Division IV – DEN-DO (Denver) | CDR Holly Miller |
| Division V – SAN-DO (San Francisco), LOS-DO (Los Angeles) | Hermie Francisco, Nicole Yuen |
| Division VI – SEA-DO (Seattle) | LCDR Kelsey Volkman |
| ORA Headquarters | |
| Office of Human and Animal Food Operations – Senior ERC | Kimberly Livsey, James (Chris) Yee |
| Division of Domestic Human and Animal Foods Operations | Linda Stewart, Nicole Clausen, Larry Stringer |
| Produce Safety Network (PSN) | CDR Brittany Nork, Gerald Bromley, Brandi McGrady |
| Division of Import Operations | Jeffery Hilgendorf |
| Office of Regulatory Science | Yelena Karaseva |

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| | |
|--|---|
| | Terri McConnell Darcy Brillhart |
| Office of Strategic Planning and Operational Policy - Recalls Branch | |
| Office of Global Policy and Strategy Latin America Office | Jason Cornell |
| Office of Criminal Investigations | Steven Li |
| Center for Food Safety and Applied Nutrition (CFSAN) | |
| Office of Compliance | CFSAN OC RCRT11 |
| Office of Food Safety | Mary Tijerina, Cecilia (Maria) Crowley, Patricia Homola Kruti Ravaliya, Stephen Hughes |
| International Affairs Staff | CAPT Teresa Fox, Jeffery Read |
| Office of Analytics and Outreach | Yan Luo |
| Office of Regulatory Science | Rebecca Bell; Hua Wang; Thomas Hammack |
| Division of Produce Safety | Kurt Nolte |
| Office of the Center Director | Mickey Parish |
| Office of the Commissioner | |
| Office of Chief Counsel | Alexandra Jabs |
| Office of Emergency Operations | Russell Zablan |
| Centers for Disease Control and Prevention (CDC) | |
| Division of Foodborne, Waterborne, & Environmental Diseases - Outbreak Response and Prevention Branch (ORPB) | CDR Laura Gieraltowski, Kane Patel, Zachary McCormic, Krystalyn B Martin, Colin A Schwensohn, Kenai McFadden, Lauren Stevenson, CDR Matthew Wise |
| US Department of Agriculture (USDA) | |
| Food Safety and Inspection Service | LCDR Jennifer Freiman LCDR Andrea Cote |
| Canada | |
| Canadian Food Inspection Agency | Robin Atkinson, Ken Marcynuk, Lorraine Haskins, Leah Isaac |
| Public Health Agency of Canada | Joyce Cheng |

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| State Partners | |
|-----------------------|---------------------|
| Alabama (AL) | Montana (MT) |
| Alaska (AK) | Nebraska (NE) |
| Arizona (AZ) | New Hampshire (NH) |
| Arkansas (AR) | New Jersey (NJ) |
| California (CA) | New Mexico (NM) |
| Colorado (CO) | New York (NY) |
| Connecticut (CT) | Nevada (NV) |
| Delaware (DE) | North Carolina (NC) |
| Florida (FL) | North Dakota (ND) |
| Georgia (GA) | Ohio (OH) |
| Hawaii (HI) | Oklahoma (OK) |
| Idaho (ID) | Oregon (OR) |
| Illinois (IL) | Pennsylvania (PA) |
| Indiana (IN) | Rhode Island (RI) |
| Iowa (IA) | South Carolina (SC) |
| Kansas (KS) | South Dakota (SD) |
| Kentucky (KY) | Tennessee (TN) |
| Maine (ME) | Texas (TX) |
| Maryland (MD) | Utah (UT) |
| Massachusetts (MA) | Virginia (VA) |
| Michigan (MI) | Washington (WA) |
| Minnesota (MN) | West Virginia (WV) |
| Mississippi (MS) | Wisconsin (WI) |
| Missouri (MO) | Wyoming (WY) |

SUPPORTING DOCUMENTS

1. CDC Line list
2. WGS Tree
3. CORE Sample Spreadsheet
4. Traceback Diagram
5. Traceback Timeline
6. Incident Package
7. Incident Data Form

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Salmonella Newport (2007MLJJP-1)/ Unknown/ Jul 2020

Date(s):

Type of Incident: CORE Signals
Districts Involved:Product Centers: CFSAN
RRT Involved:Qualifier: Foodborne Illness
Notification Source: CDC**Description**

On 7/10/2020, CDC notified PulseNet users of a national cluster of Salmonella Newport illnesses. The cluster has rapidly expanded and as of 7/21/2020, there are 134 cases across 16 states: CA (3), IA (3), IL (1), MI (13), MN (3), MO (2), MT (11), NC (3), OH (5), OR (42), SD (8), TN (1), UT (28), WA (1), WI (1), WY (9). Most illnesses are geographically focused in the central, midwestern, and western states; however, recently illnesses have been identified in southeast states of NC and TN. Isolation dates range from 6/20/2020 to 7/11/2020 and onset dates (n=42) range from 6/19/2020 to 7/7/2020. The lag time is 16 days and the outbreak is considered ongoing. The cases range in age from two to 92 years, with a median age of 40 years and 55% of cases are female. There have been 24 hospitalizations and no deaths. Seven of 68 cases have self-identified as having Hispanic/Latino ethnicity.

Isolates from all cases are highly related to each other and are within 0-4 alleles and 0-6 SNPs. Additionally, Canada health authorities report one clinical isolate matching the genetic sequence of this cluster. This cluster is related by five alleles or 11 SNPs to isolates from the historical cluster 1509MLJJP-1, which closed without an identified vehicle. NCBI's Pathogen Detection Pipeline identified historical clinical isolates from the United Kingdom and CA almond isolates (raw almond samples collected in 2016 and 2017) are related within 14 SNPs from this cluster. The nut samples were collected under a blinded sampling assignment with a contract laboratory.

CDC hosted States Calls on 7/15 and 7/20 and cases reported multiple common exposures including, fresh produce (tomatoes, cilantro, onions, and leafy greens), eggs, cheese, beef, chicken, and pork. Tree nuts were rarely reported (three of 25 cases). State investigators decided to interview a select few existing and new cases with a modified National Hypothesis Generating Questionnaire (NHGQ). The only food items that were significant ($\alpha=0.05$) when compared to the FoodNet Population Survey were cilantro and leafy greens. Cases across several states reported consuming foods from Mexican-style and sandwich-style restaurants. Nationally, 6 cases reported Subway, 3 reported Jersey Mike's, and two reported Jimmy John's.


Eight restaurant and facility subclusters have been identified in CA and OR.

The California Department of Public Health is investigating five Mexican-style restaurant sub-clusters all in the Northern CA region and all part of a larger Salmonella serogroup C outbreak investigation. This investigation involves 38 cases and 35 cases are pending WGS sequencing (so at this time, it is unknown if these are related by WGS or epi-linked to the larger Newport cluster 2007MLJJP-1). All CA cases in this cluster are from northern CA and most are in the San Francisco Bay area. An additional 10 Salmonella illnesses from Central and Southern California have not been added to this cluster. Most cases reported consuming fresh produce as part of their meal or as an ingredient in salsa and pico de gallo. State investigators have requested the restaurants provide lists of ingredients (including dried spices and seasonings) used to make pico de gallo, salsas, and guacamole. Invoices for produce (including cilantro and tomatoes) have been requested for all restaurants. Cilantro and tomatoes are items of greatest interest for their state investigation.

Oregon Health Authority is investigating 3 sub-clusters; 2 are associated with restaurants (Mexican-style and Subway) and the 3th is associated with an assisted living center.

Sub-clusters identified in the Salmonella Newport (2007MLJJP-1) investigation.

(b) (4)



(b)(4)

8. Subway (various locations) (OR-03)

No single suspect vehicle has been identified; however, CDC believes the vehicle is likely an FDA-regulated food product and may possibly be tomatoes, cilantro, onions, or peppers. Supplier review and traceback efforts may be able to aid the investigation by identifying common suppliers and narrowing down the items of interest.

CDC will be issuing an investigational notice about this investigation.

On Tuesday, 7/21/2020, CORE Signals transferred this incident to CORE Response Team 3 based on the following rationale:

1) This is a rapidly expanding multi-state outbreak likely associated with a FDA-regulated product; items of greatest interest include tomatoes, cilantro, onions, or peppers.

2) Response coordination for traceback, sampling, product and firm actions, and communication is needed

| Surveillance Information / Epidemiology | | | | | | | |
|---|--|--|--|---------------------------------|----|-------------|---|
| Pathogen/Contaminant: | Biological - Bacteria / Salmonella Newport | | | Serotype: | | | |
| Total Cases: | 134 | Confirmed: | | Hospitalized: | 24 | Deaths: | 0 |
| Location/Number of Cases: | | CA (3), IA (3), IL (1), MI (13), MN (3), MO (2), MT (11), NC (3), OH (5), OR (42), SD (8), TN (1), UT (28), WA (1), WI (1), WY (9) | | | | | |
| Age Range: | | 2-92 | | % Female: | | 55 | |
| Median Age: | | 40 | | Animal/Human: | | | |
| Date of First Exposure: | | | | Date of Last Exposure: | | | |
| Date of First Onset: | | 06/19/2020 | | Date of Last Onset: | | 07/07/2020 | |
| Date of First Isolation: | | 06/20/2020 | | Date of Last Isolation: | | 07/11/2020 | |
| PFGE Pattern ID: | | | | PulseNet Cluster ID: | | 2007MLJJP-1 | |
| PFGE Pattern Frequency: | | | | Serotype Frequency: | | | |
| MLVA pattern/Frequency: | | | | Historical Pattern Information: | | | |
| Complaint # | | Complaint Details | | | | | |
| | | | | | | | |
| Pet Food Reports? | | | | MedWatch Reports? | | | |

| Vehicle / Product | |
|----------------------|---------|
| Product Category: | |
| Product Name: | Unknown |
| Product Description: | |
| Food Safety Code: | |
| Vehicle Status: | |
| Product Actions: | |
| Product Origin: | |

| Laboratory Information | | | |
|--------------------------|-----------------------------|--------------------------------|-----------------------------|
| Total Number of Samples: | Number of Positive Samples: | Number of Pending/CRO Samples: | Number of Negative Samples: |

| Investigations / Inspections |
|------------------------------|
|------------------------------|

| Traceback Investigations |
|--------------------------|
|--------------------------|

| Communications | |
|--------------------------------|--|
| FDA Communication Dates: | |
| Firm Press Release Dates: | |
| Release Dates - Other Sources: | |

Situation Report Dates:

Other Information

Signals Evaluation:

Signals Evaluation Description:

Response Start Date: 07/21/2020

Response End Date:

FDA End Date:

Post-Response Activity:

Post-Response Activities
Description:

Salmonella Newport/Red Onion/ Jul 2020

Date(s):

Type of Incident: CORE Signals Product Centers: CFSAN
 Districts Involved: LOS-DO, SAN-DORRT Involved:

Qualifier: Foodborne Illness
 Notification Source: CDC

Description

On 7/13/20, after receiving notification from PulseNet, FDA CORE Signals began evaluating a cluster of 134 Salmonella Newport illnesses from 16 states [CA (3), IA (3), IL (1), MI (13), MN (3), MO (2), MT (11), NC (3), OH (5), OR (42), SD (8), TN (1), UT (28), WA (1), WI (1), WY (9)]. Canadian health authorities reported one clinical isolate matching the genetic sequence of this cluster. At the time of transfer, epidemiologic information was unable to identify a single suspect vehicle. Vehicles of interest included: tomatoes, cilantro, onions, and peppers. The traceback investigation was narrowed to red onions based on the findings of the Canadian outbreak investigation which identified red onions from Thomson International Inc. (Bakersfield, CA) as the likely source of Canadian illnesses. FDA's traceback investigation identified Thomson International Inc. (Bakersfield, CA) as the source of red onions to ten US POS where ill people reported exposure prior to becoming ill. On 8/1/20, Thomson International Inc. (Bakersfield, CA) initiated a recall of red, yellow, white, and sweet yellow onions produced by Thomson International. A total of 113 samples were collected by FDA during investigations at Thomson International, Inc (Bakersfield, CA) or targeted sampling at distribution centers. Ten samples (4 sediment, 1 scat and 5 ultrafiltration water samples) were reported positive for Salmonella but did not match the outbreak strain. The vehicle for this outbreak was confirmed as red onions based on the epidemiologic and traceback evidence. At the conclusion of the CORE Response phase, a total of 1132 cases in 48 states [AK (25), AL (2), AR (2), AZ (39), CA (128), CO (32), CT (2), DE (2), FL (8), GA (11), HI (3), ID (43), IL (54), IN (4), IA (31), KS (3), KY (3), ME (6), MA (2), MD (7), MI (47), MN (19), MO (11), MS (5), MT (72), NC (6), ND (9), NE (10), NH (1), NJ (12), NM (3), NV (14), NY (14), OH (11), OK (1), OR (110), PA (27), RI (3), SC (1), SD (24), TN (7), TX (2), UT (115), VA (10), WA (150), WI (11), WV (3), WY (27)] were associated with this outbreak.

Surveillance Information / Epidemiology

| | | | | | | | |
|---------------------------|--|---|-----------|---------------------------------|-----|-------------|---|
| Pathogen/Contaminant: | Biological - Bacteria / Salmonella Newport | | Serotype: | | | | |
| Total Cases: | 1132 | Confirmed: | | Hospitalized: | 167 | Deaths: | 0 |
| Location/Number of Cases: | | AK (25), AL (2), AR (2), AZ (39), CA (128), CO (32), CT (2), DE (2), FL (8), GA (11), HI (3), ID (43), IL (54), IN (4), IA (31), KS (3), KY (3), ME (6), MA (2), MD (7), MI (47), MN (19), MO (11), MS (5), MT (72), NC (6), ND (9), NE (10), NH (1), NJ (12), NM (3), NV (14), NY (14), OH (11), OK (1), OR (110), PA (27), RI (3), SC (1), SD (24), TN (7), TX (2), UT (115), VA (10), WA (150), WI (11), WV (3), WY (27) | | | | | |
| Age Range: | | 5 days -102 | | % Female: | | 58 | |
| Median Age: | | 41 | | Animal/Human: | | | |
| Date of First Exposure: | | | | Date of Last Exposure: | | | |
| Date of First Onset: | | 06/19/2020 | | Date of Last Onset: | | 09/11/2020 | |
| Date of First Isolation: | | 06/20/2020 | | Date of Last Isolation: | | 09/14/2020 | |
| PFGE Pattern ID: | | | | PulseNet Cluster ID: | | 2007MLIIP-1 | |
| PFGE Pattern Frequency: | | Common | | Serotype Frequency: | | Common | |
| MLVA pattern/Frequency: | | | | Historical Pattern Information: | | | |
| Complaint # | | Complaint Details | | | | | |
| | | | | | | | |
| Pet Food Reports? | | | | MedWatch Reports? | | | |

Vehicle / Product

| | |
|----------------------|---|
| Product Category: | Produce |
| Product Name: | red onion |
| Product Description: | red onion |
| Food Safety Code: | |
| Vehicle Status: | Lab Confirmed, Epi Confirmed, Traceback Confirmed |

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| | |
|---------------------------|---------|
| Vehicle / Product: | |
| Product Actions: | Recalls |
| Product Origin: | |

| Laboratory Information | | | | | | |
|--|--------------------|--|---------------|--------------------------------|--------------------|-----------------------------|
| Total Number of Samples: | 113 | Number of Positive Samples: | 10 | Number of Pending/CRO Samples: | 0 | Number of Negative Samples: |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146754 | 08/21/2020 | Soil/sediment: | Environmental | ORA PSN | NFFL | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. Newport, S. Montevideo; Does not match the outbreak strain | | This is a sediment sample | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146755 | 08/21/2020 | Soil/sediment: | Environmental | ORA PSN | NFFL | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. Montevideo; Does not match the outbreak strain | | This is a sediment sample | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146715 | 08/21/2020 | Soil/sediment: | Environmental | ORA PSN | NFFL | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. Newport; S. IIIa 53:z4,z23:-; Does not match the outbreak strain | | This is a soil/sediment sample. | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146716 | 08/21/2020 | Soil/sediment: | Environmental | ORA PSN | NFFL | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. Oranienburg, S. Muenchen; IIIa 41:z4, z23:-; IIIa 53:z4,z23:-; Does not match the outbreak strain | | This is a soil/sediment sample | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146795 | 08/24/2020 | scat/ bird dropping: | Environmental | ORA PSN | NFFL | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. IIIa 41:z4,z23:-; Does not match the outbreak strain | | This is a sample of scat/bird dropping material. | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146713 | 08/20/2020 | Dead End Ultrafiltration | Environmental | ORA PSN | CFSAN ORS | |
| Laboratory Conclusion | | Sample Description | | | | |
| S. Newport; Does not match the outbreak strain | | This sample includes a Hemodialyzer water filter | | | | |
| | | | | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By | |
| 1146714 | 08/20/2020 | Dead End Ultrafiltration | Environmental | ORA PSN | CFSAN ORS | |
| Laboratory Conclusion | | Sample Description | | | | |

| | | | | | |
|---|--------------------|---|---------------|---------------------|--------------------|
| S. Newport*, S. Montevideo, S. Senftenberg, S. Thompson; Does not match the outbreak strain | | This sample consists of a hemodialyzer water filter | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By |
| 1146757 | 08/24/2020 | Dead End Ultrafiltration | Environmental | ORA PSN | CFSAN ORS |
| Laboratory Conclusion | | Sample Description | | | |
| S. Newport, S. Montevideo, S. Thompson; Does not match the outbreak strain | | This sample is a water filter sample collected using a Hemodialyzer REXEED 25S. | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By |
| 1146791 | 08/24/2020 | Dead End Ultrafiltration | Environmental | ORA PSN | CFSAN ORS |
| Laboratory Conclusion | | Sample Description | | | |
| S. Newport, S. Braenderup, S. Montevideo, S. Senftenberg, S. Thompson, S. Wangata; Does not match the outbreak strain | | This water filter sample was collected using a Hemodialyzer REXEED 25S | | | |
| Positive Sample Number | Date of Collection | Sample Source | Sample Type | Sample Collected By | Sample Analyzed By |
| 1146797 | 08/24/2020 | Dead End Ultrafiltration | Environmental | ORA PSN | CFSAN ORS |
| Laboratory Conclusion | | Sample Description | | | |
| S. Anatum, S. Taksony, S. Tennessee; Does not match the outbreak strain | | This water filter sample was collected using a Hemodialyzer REXEED - 25S | | | |

| Investigations / Inspections | | | | | |
|------------------------------|-------------|------------|---------|---------------|--------|
| Firm Name | City | State | Country | FEI | Type |
| Thomson International, Inc | Bakersfield | CA | | 3004391505 | Grower |
| FACTS No | Start Date | End Date | 483 | Activity | |
| 12055268 | 08/03/2020 | 08/05/2020 | No | investigation | |
| Firm Name | City | State | Country | FEI | Type |
| Thomson International, Inc | Bakersfield | CA | | 3004391505 | Grower |
| FACTS No | Start Date | End Date | 483 | Activity | |
| 12055297 | 08/06/2020 | 08/27/2020 | No | investigation | |
| Firm Name | City | State | Country | FEI | Type |
| Thomson International, Inc | Bakersfield | CA | | 3004391505 | Grower |
| FACTS No | Start Date | End Date | 483 | Activity | |
| 12060391 | 08/18/2020 | 08/24/2020 | No | investigation | |

| Traceback Investigations | | | |
|---------------------------------------|----------------------------|-----------------------------------|-----|
| Product Traced: | red onion | Traceback Completed By: | FDA |
| # of Traceback Legs: | 4 | Traceback Convergence Identified? | Yes |
| Identified Firm Name: | Thomson International Inc. | | |
| Traceback Investigations Description: | | | |

| Communications | |
|--------------------------|---|
| FDA Communication Dates: | 7/31/2020, 8/3/2020, 8/7/2020, 8/11/2020, 8/13/2020, 8/18/2020, 9/1/2020, 10/8/2020 |

| | | |
|---|---------------------------|------------------------------|
| Communication Case 1:21-cv-01609-JLT-CDB Document 153 Filed 06/04/24 Page 45 of 196 | | |
| Firm Press Release Dates: | | 8/1/2020 |
| Release Dates - Other Sources: | | |
| Situation Report Dates: | | |
| Communication Type | Communication Date | Communication Details |
| FDA Communications | 07/31/2020 | |
| Communication Link | | |
| https://www.fda.gov/food/outbreaks-foodborne-illness/outbreak-investigation-salmonella-newport-red-onions-july-2020 | | |
| Communication Type | Communication Date | Communication Details |
| Firm Press Release | 08/01/2020 | |
| Communication Link | | |
| https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts/thomson-international-inc-conducts-voluntary-recall-red-yellow-white-and-sweet-yellow-onions-because | | |

| | |
|---------------------------------------|------------|
| Other Information | |
| Signals Evaluation: | |
| Signals Evaluation Description: | |
| Response Start Date: | 07/21/2020 |
| Response End Date: | |
| FDA End Date: | |
| Post-Response Activity: | |
| Post-Response Activities Description: | |

INCIDENT OBJECTIVES (ICS 202), Adapted for FDA

1. Incident Name: *Salmonella*
Newport/Red Onion/Jul 2020

2. Operational Period: Date From: 9/11/20 Date To: 9/18/20
Time From: 1700EDT Time To: 1700EDT

3. Objective(s):

(b) (5)

4. Operational Period Command Emphasis:

2020-Nov-03

Operational Period 5

From 8/24/20 to 8/25/20, ORA HAF4W (DEN) collected twelve product samples (#1146570-1146575, 1146576-1146581) from Sysco (b) (4). On 8/25/20, HAF1E (NYK) collected 18 product samples (1137048-1137056, 1137944-1137952) from Sysco (b) (4). From 8/25/20 to 8/31/20, ORA ORS reported that two product samples (# 1134051, 1134052), collected from Sysco (b) (4) and seventeen product samples (#1146562-1146568, 1146570-1146581), collected from Sysco (b) (4) and three product samples (#1137946, 1137054- 1137055), collected from Sysco (b) (4) and five samples (#1146794, 1146792, 1137803-1137805), collected during the investigation at Thomson International Inc. (Bakersfield, CA) growing fields in Holtville, CA, were negative for *Salmonella*. On 8/28/20, four sediment samples (#1146715, 1146716, 1146754-1146755), collected during the investigation at Thomson International Inc. (Bakersfield, CA) growing fields in Holtville, CA, were confirmed positive for *Salmonella*. One scat sample (#1146795) was reported as CRO. On 8/27/20, CFSAN ORS reported that two ultrafiltration water samples (#1146713-1146714), collected by ORA PSN during the investigation at Thomson International Inc. (Bakersfield, CA) growing fields in Holtville, CA, were CRO; on 8/31/20, the samples were confirmed positive for *Salmonella*. In summary, a total of 113 samples have been collected in response to this outbreak: Six (4 sediment; 2 ultrafiltration water) samples are positive, 1 CRO (scat), 86 samples are negative, 20 (15 product; 5 ultrafiltration water) samples are pending. On 8/24/20, the investigation at Thomson International, Inc. in Holtville, CA was closed out and on 8/27/20, the investigation at Thomson International, Inc. in Bakersfield, CA was closed out. As of 9/1/20, CDC reports 1,023 illnesses in 47 states.

Operational Period 6

On 9/2/20, ORA ORS reported that fourteen product samples (#1137944, 1137945, 1137947-1137952, 1137049-1137053, 1137056) were negative for *Salmonella*. One product sample (#1137048) was reported as CRO but on 9/8/20, the sample was reported negative. Additional analysis of two environmental samples (#1146754, 1146755), previously reported as positive for *Salmonella* but did not match the outbreak strain by WGS, identified additional potential isolates. Identification, serotyping and WGS are pending. On 9/4/20, ORA ORS reported that one scat sample (#1146795) was confirmed positive for *Salmonella*; Serotyping and WGS pending. On 9/8/20, CFSAN OAO reported that two *Salmonella* positive ultrafiltration water samples (#1146713, 1146714) did not match the outbreak strain by WGS. On 9/8/20, three ultrafiltration water samples (#1146757, 1146791 1146797) were confirmed positive for *Salmonella*. Two samples (#1146793, 1146796) were negative. Serotyping and WGS are pending. In summary, as of 9/11/20 a total of 113 samples have been collected and analyzed for this investigation. Ten samples are positive for *Salmonella*. WGS for six of the samples (4 sediment, 2 ultrafiltration water) show that the isolates do not match the outbreak strain. WGS is pending for four samples (1 scat, 3 ultrafiltration water). As of 9/11/20, CDC reports 1,095 illnesses in 48 states.

| | | |
|--|--|-----------------------------------|
| 1. Incident Name: <i>Salmonella</i> Newport/Red Onion/Jul 2020 | 2. Operational Period: Date From: 9/11/20 Date To: 9/18/20 Time From: 1700EDT Time To: 1700EDT | |
| 6. Incident Action Plan (the items checked below are included in this Incident Action Plan): | | |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> ICS 203 <input type="checkbox"/> Map/Chart <input type="checkbox"/> ICS 204 <input type="checkbox"/> Weather Forecast/Tides/Currents <input type="checkbox"/> ICS 205 <input type="checkbox"/> ICS 206 <input type="checkbox"/> ICS 208 </div> <div style="width: 50%;"> Other Attachments: <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ </div> </div> | | |
| 7. Prepared by: Name: <u>Stranjae' Ivory</u> Position/Title: <u>Planning Chief</u> Signature: <u>Stranjae' Ivory</u> | | |
| 8. Approved by Incident Commander: Name: <u>Evelyn Pereira</u> Signature: <u>Evelyn Pereira</u> | | |
| ICS 202 | IAP Page | Date/Time: 11 September 2020 1436 |

Updated by FDA 2/2011

Salmonella Newport Cluster 2007MLJJP-1

July 24, 2020

Cases of *Salmonella*Newport in cluster 2007/MLJP-1 as of July 24, 2020

| State | No. of cases |
|----------------|--------------|
| Alaska | 6 |
| Arizona | 13 |
| California | 10 |
| Delware | 1 |
| Florida | 1 |
| Iowa | 10 |
| Idaho | 5 |
| Illinois | 9 |
| Indiana | 1 |
| Kentucky | 1 |
| Maine | 2 |
| Michigan | 15 |
| Minnesota | 7 |
| Missouri | 3 |
| Montana | 11 |
| North Carolina | 3 |
| North Dakota | 3 |
| Nebraska | 5 |
| Nevada | 2 |
| New York | 1 |
| Ohio | 6 |
| Oregon | 51 |
| South Dakota | 13 |
| Tennessee | 2 |
| Texas | 1 |
| Utah | 43 |
| Virginia | 3 |
| Washington | 1 |
| Wisconsin | 2 |
| Wyoming | 11 |
| Total | 242 |

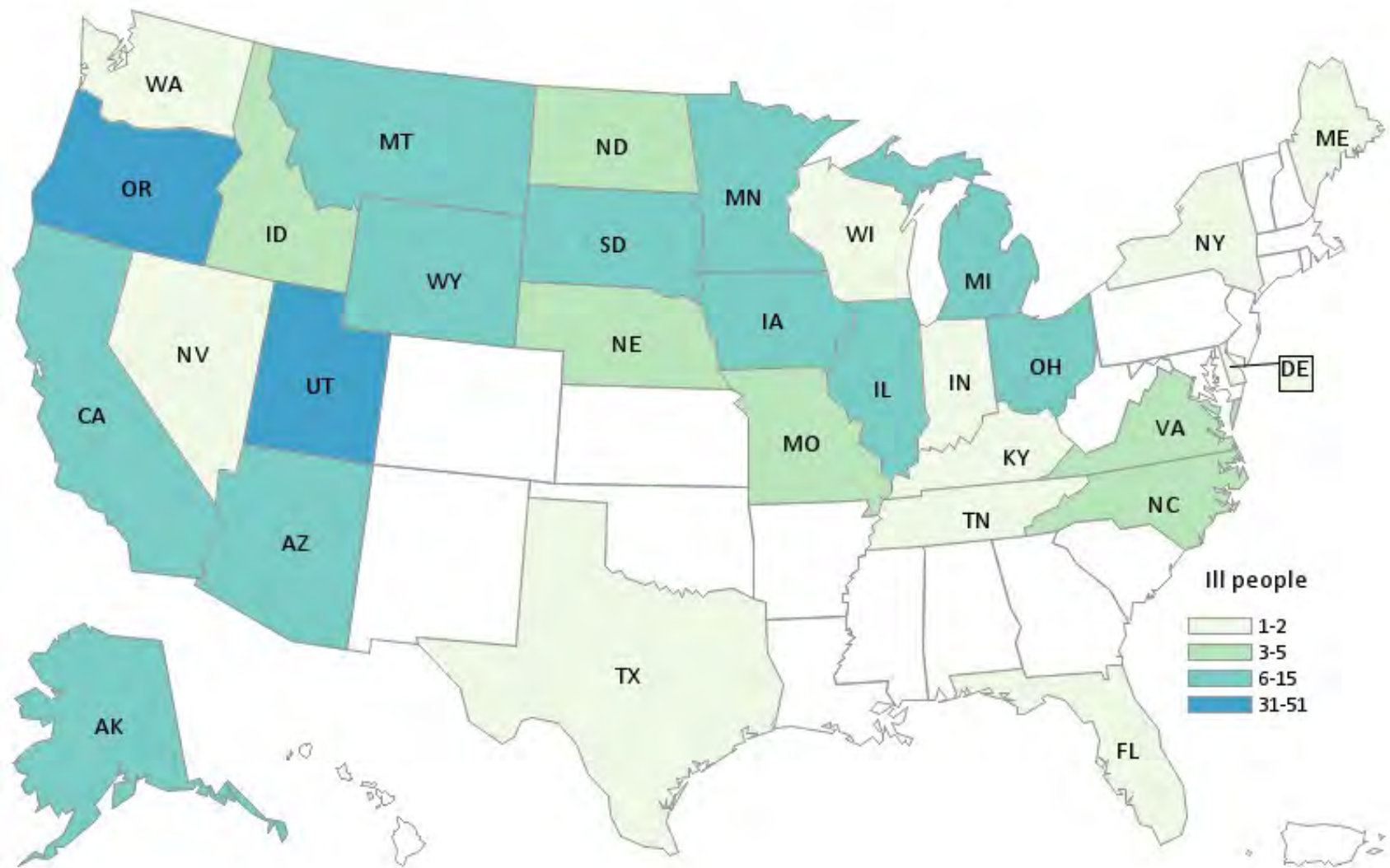
- Case definition:
 - Infection with *Salmonella*Newport and
 - with isolate matching by cgMLST within 0-4 alleles
 - with illness onset during 6/19/2020–present
- 242 cases from 30 states
- Isolation dates: 6/20/2020 –7/15/2020
- Reported onset dates (n=118): 6/19/2020 –7/11/2020

Table 2. Patient demographics in *Salmonella*Newport cluster 2007MLJJP-1, as of July 24, 2020

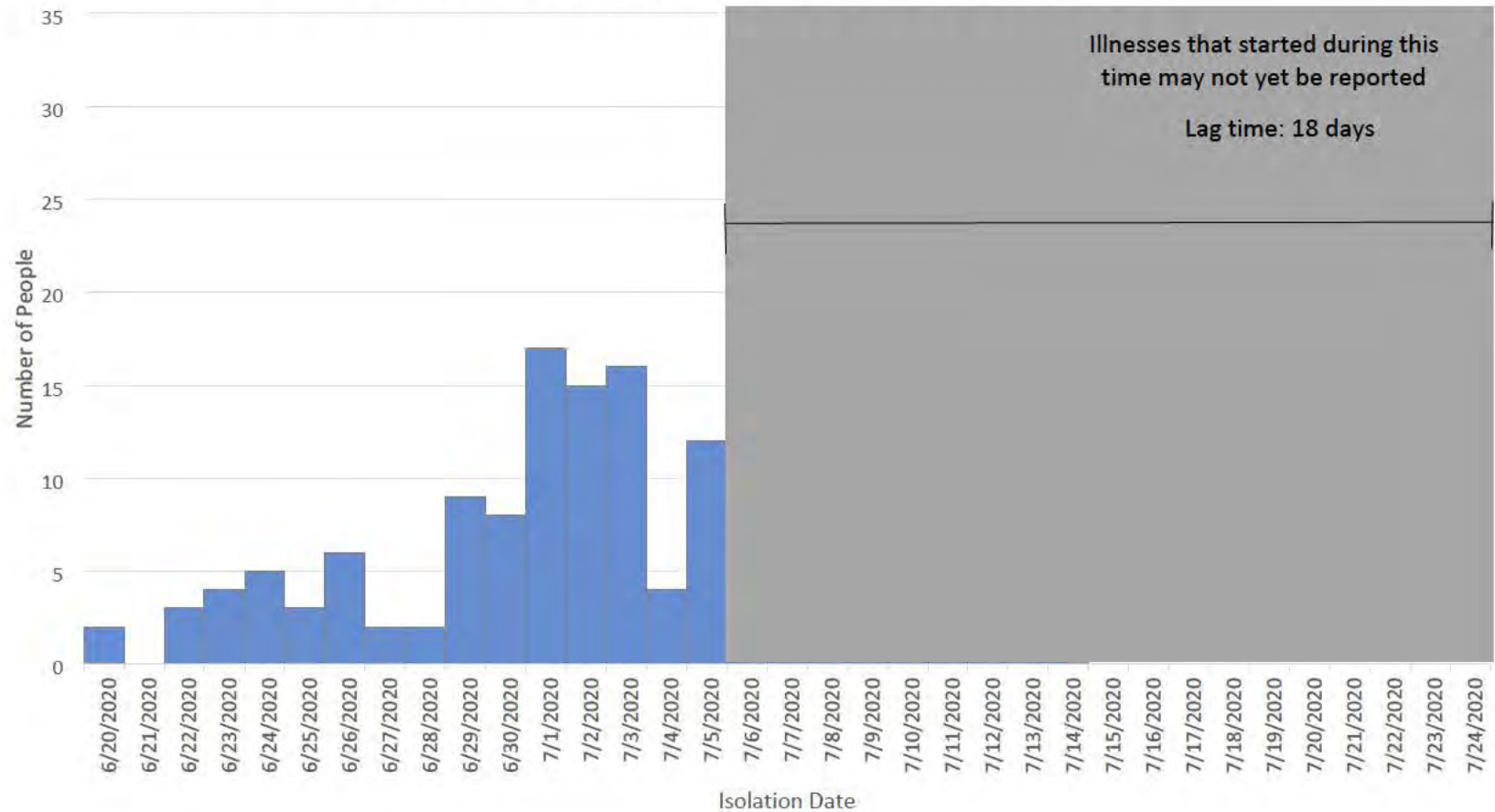
| Demographics | |
|---------------------------------|-----------|
| Age range (median), (n=241) | 0-92 (40) |
| Age categories in years (n=241) | n (%) |
| <5 | 4 (2) |
| 5 to 17 | 13 (5) |
| 18 to 59 | 166 (69) |
| ≥60 | 57 (24) |
| Sex (n=238) | n(%) |
| Female | 127 (53) |

Table 3. Patient outcomes in *Salmonella*Newport cluster 2007MLJJP-1, as of July 24, 2020

| Outcomes | n (%) |
|----------------------|---------|
| Hospitalized (n=123) | 33 (27) |
| Died (n=128) | 0 (0) |



People infected with the outbreak strain of *Salmonella* Newport by date of sample isolation* as of July 24th, 2020



WGS Information on Cluster

- All cases highly related at 0-4 alleles by cgMLST.
- Cluster is related (5 alleles) to 2 isolates from the historical cluster 1509MLJJP-1 (no vehicle identified)
- NCBI Pathogen Detection Pipeline shows international clinical matches from the UK and almond isolate matches within 14 SNPs.
- Canada reports matches by sequencing
- Cluster 2007MLJJP-1 is >2,000 alleles apart from 2006MLJJP-1

Exposures from SEDRIC as of July 24, 2020

- Leafy greens (45/78) [p-value = 0.127]
 - Cilantro (27/78) [p-value = 0.0001]
 - Onions (40/78) [p-value = 0.999]
 - Tomatoes (55/78) [p-value = 0.034]
 - Chicken (56/78) [p-value = 0.411]
 - Ground beef (50/78) [p-value < 0.001]
 - Other beef (23/78) [p-value = 0.999]
 - Almonds (6/54) [p-value= 0.999]
 - *all the above includes Yes + maybe
-
- Grocery stores: 23/102 Walmart, 21/102 Costco, 19/102 Smith's, 14/102 Fred Meyers, 9/102 HyVee
 - Mexican style restaurants: 33/95
 - Sandwich restaurants: 10/95 Subway, 5/95 Jersey Mike's, 3/95 Jimmy John's
 - CA reports 5 Mexican-style restaurant subclusters
 - OR reporting various type of subclusters
 - Mexican-style restaurant
 - Nursing home
 - Various Subways
 - WY – Mexican-style restaurant subcluster
 - MT – Local restaurant subcluster
 - MI – 4 Mexican style restaurant subclusters, 1 other restaurant subcluster

Exposures from HGQ as of July 24, 2020

- 8/16 ground beef
- 9/16 other beef
- 13/16 chicken
 - No subclusters identified commonalities among meat items
- 14/16 leafy greens
 - Romaine most common (7)
- 6/16 cilantro
- 13/16 tomatoes
- 9/16 onions
 - +3 likely onion-containing dishes

Salmonella Newport Cluster 2007MLJJP-1

July 29, 2020

| State | No. of cases |
|----------------|--------------|
| Alaska | 6 |
| Arizona | 14 |
| California | 49 |
| Colorado | 10 |
| Delaware | 1 |
| Florida | 3 |
| Idaho | 6 |
| Illinois | 10 |
| Indiana | 2 |
| Iowa | 15 |
| Kansas | 1 |
| Kentucky | 1 |
| Maine | 4 |
| Maryland | 1 |
| Michigan | 23 |
| Minnesota | 10 |
| Mississippi | 2 |
| Missouri | 8 |
| Montana | 33 |
| Nebraska | 5 |
| Nevada | 5 |
| New York | 5 |
| North Carolina | 3 |
| North Dakota | 5 |
| Ohio | 7 |
| Oregon | 71 |
| Pennsylvania | 2 |
| South Carolina | 1 |
| South Dakota | 14 |
| Tennessee | 5 |
| Texas | 1 |
| Utah | 63 |
| Virginia | 4 |
| Washington | 2 |
| West Virginia | 2 |
| Wisconsin | 5 |
| Wyoming | 17 |

Cases of *Salmonella*Newport in cluster 2007MLJJP-1 as of July 29, 2020

- Case definition:
 - Infection with *Salmonella*Newport and
 - with isolate matching by cgMLST within 0-5 alleles
 - with illness onset during 6/19/2020–present
- 416 cases from 37 states
- Isolation dates: 6/20/2020 –7/18/2020
- Reported onset dates (n=226): 6/19/2020 –7/12/2020

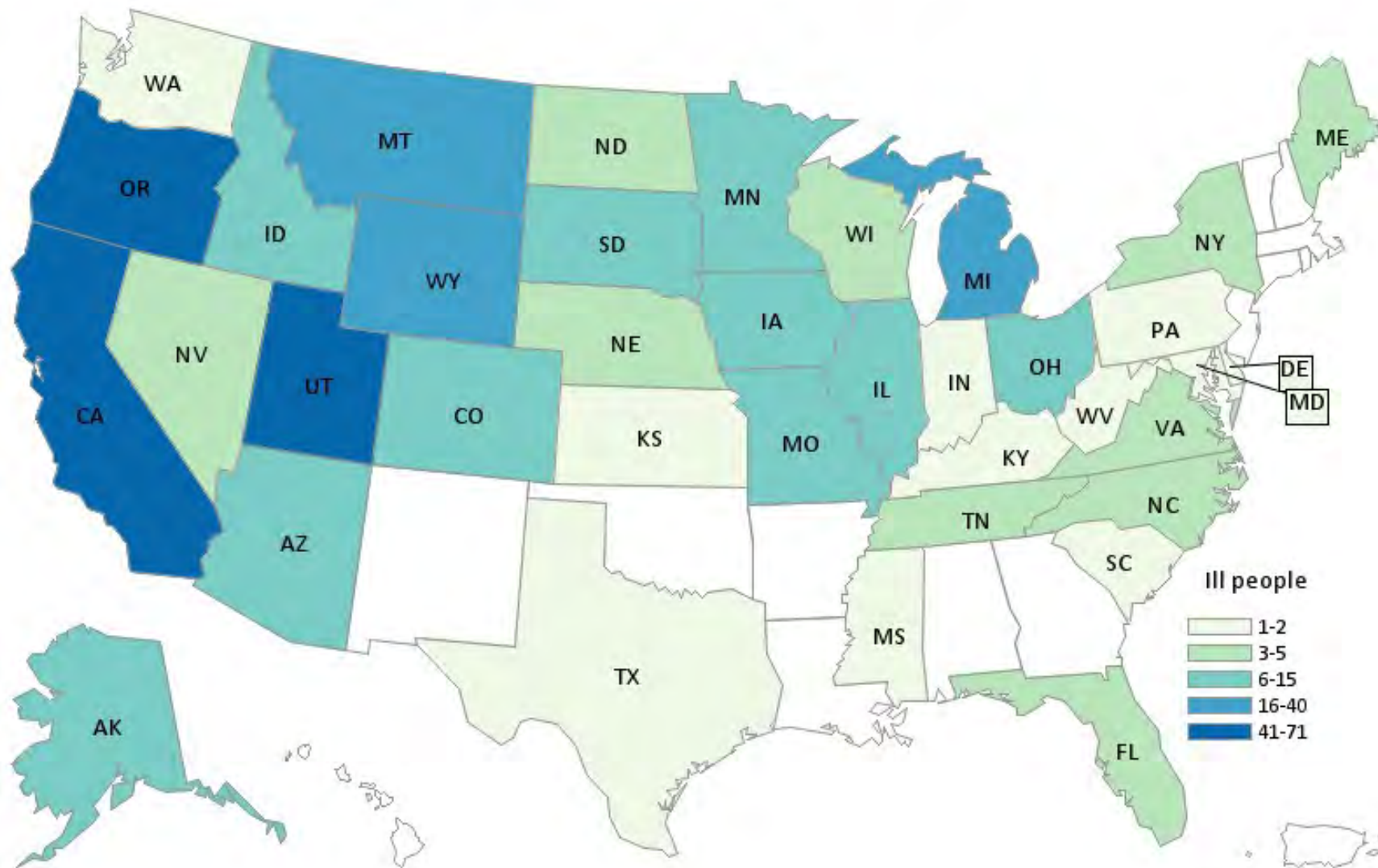
Table 2. Patient demographics in *Salmonella*Newport cluster 2007MLJJP-1, as of July 29, 2020

| Demographics | |
|---------------------------------|------------|
| Age range (median), (n=414) | 0-102 (39) |
| Age categories in years (n=414) | n (%) |
| <5 | 7 (2) |
| 5 to 17 | 23 (6) |
| 18 to 59 | 300 (72) |
| ≥60 | 84 (20) |
| Sex (n=408) | n(%) |
| Female | 213 (52) |

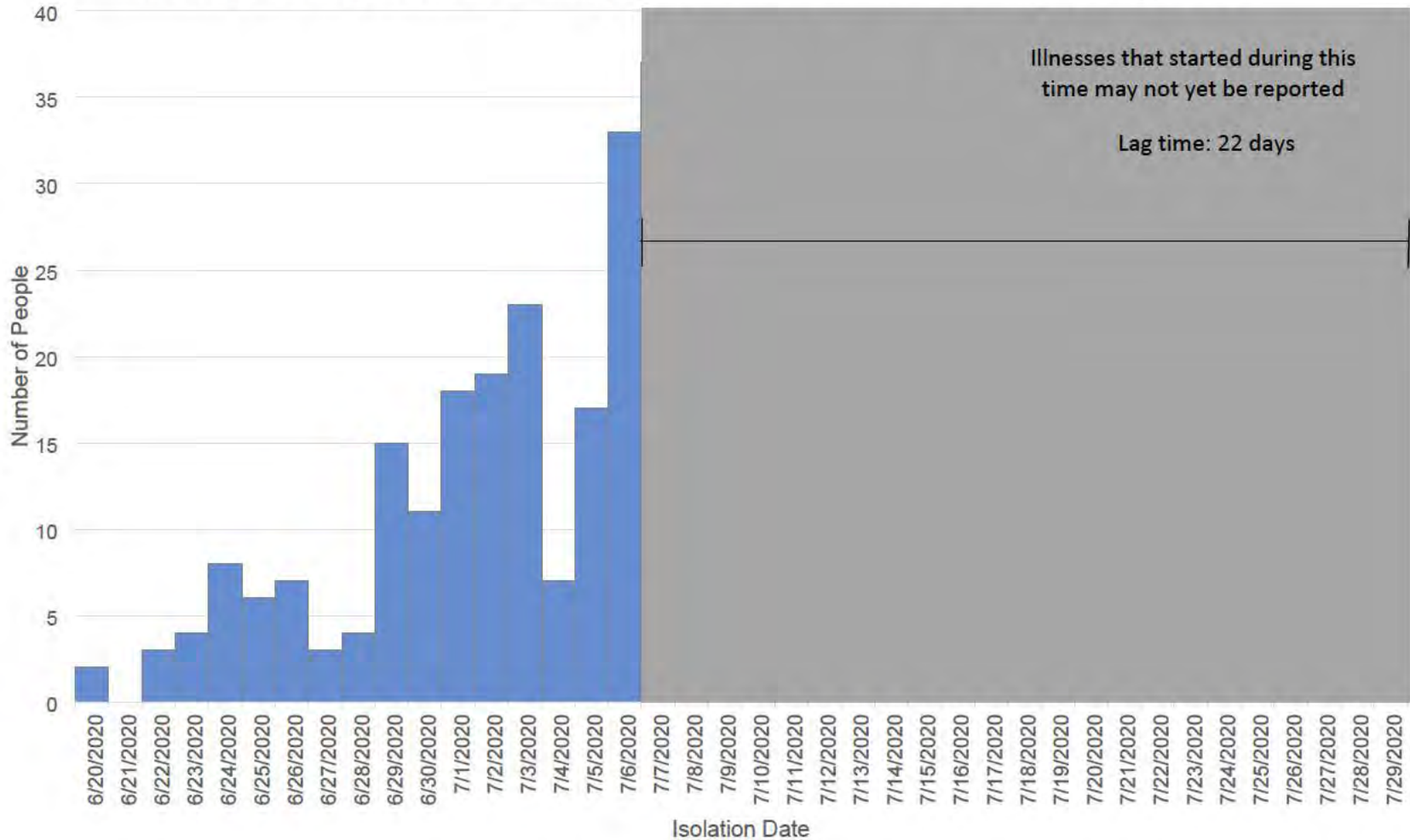
Table 3. Patient outcomes in *Salmonella*Newport cluster 2007MLJJP-1, as of July 29, 2020

| Outcomes | n (%) |
|----------------------|---------|
| Hospitalized (n=236) | 59 (25) |
| Died (n=233) | 0 (0) |

Persons infected with the outbreak strain of *Salmonella* Newport,
Case 1:21-cv-01609-JLT-CDB Document 153 Filed 06/04/24 Page 61 of 196
by state of residence, as of July 29, 2020 (n=416)



People infected with the outbreak strain of **Salmonella** Newport by date of sample isolation* as of July 29th, 2020



WGS Information on Cluster

- All cases highly related at 0-5 alleles by cgMLST.
- Cluster is related (5 alleles) to 2 isolates from the historical cluster 1509MLJJP-1 (no vehicle identified)
- NCBI Pathogen Detection Pipeline shows international clinical matches from the UK and almond isolate matches within 14 SNPs.
- Canada reports matches by sequencing
- Cluster 2007MLJJP-1 is >2,000 alleles apart from 2006MLJJP-1

Exposures from HGQ as of July 29, 2020

- 34/52 ground beef
- 25/52 other beef
- 42/52 chicken
- 45/52 leafy greens
 - 21 romaine, 21 iceberg
- 26/52 cilantro
- 40/52 tomatoes
 - 14 cherry/grape, 9 red round, 9 vine, 5 roma, 10 unspecified
- 37/52 onions
 - 10 red, 9 white, 7 yellow, 2 green, 13 unspecified
 - +3 likely onion-containing dishes

Subcluster Exposures as of July 29, 2020

| SCID | White Onion | Green Onion | Red Onion | Red Round Tomatoes | Roma Tomatoes | Green Peppers | Hot Peppers | Cilantro | Ground Beef |
|-------|-------------|-------------|-----------|--------------------|---------------|---------------|-------------|----------|-------------|
| SC-01 | | X | X | | X | | X | X | |
| SC-02 | | | X | X | | X | | X | X |
| SC-03 | X | | X | | X | X | | X | |
| SC-04 | | X | X | | | X | X | X | X |
| SC-05 | | X | X | | | | X | X | X |
| SC-06 | X | | X | X | | | | X | X |
| SC-07 | X | | X | X | | | | | |
| SC-08 | | X | X | X | | X | | | X |

Salmonella Newport Outbreak 2007MLJJP-1

August 12, 2020

| State | No. of cases |
|----------------|--------------|
| Alabama | 1 |
| Alaska | 17 |
| Arizona | 32 |
| Arkansas | 2 |
| California | 109 |
| Colorado | 14 |
| Connecticut | 2 |
| Delaware | 1 |
| Florida | 4 |
| Georgia | 2 |
| Hawaii | 3 |
| Idaho | 33 |
| Illinois | 44 |
| Indiana | 3 |
| Iowa | 20 |
| Kansas | 2 |
| Kentucky | 1 |
| Maine | 5 |
| Maryland | 1 |
| Massachusetts | 2 |
| Michigan | 41 |
| Minnesota | 17 |
| Mississippi | 4 |
| Missouri | 10 |
| Montana | 52 |
| Nebraska | 10 |
| Nevada | 11 |
| New Hampshire | 2 |
| New Jersey | 4 |
| New Mexico | 1 |
| New York | 7 |
| North Carolina | 5 |
| North Dakota | 9 |
| Ohio | 11 |
| Oregon | 90 |
| Pennsylvania | 15 |
| Rhode Island | 1 |
| South Carolina | 1 |
| South Dakota | 21 |
| Tennessee | 6 |
| Texas | 2 |
| Utah | 97 |
| Virginia | 8 |
| Washington | 34 |
| West Virginia | 2 |
| Wisconsin | 9 |
| Wyoming | 21 |

Cases of *Salmonella*Newport in cluster 2007MLJJP-1 as of August 12, 2020

- Case definition:
 - Infection with *Salmonella*Newport and
 - with isolate matching by cgMLST within 0-6 alleles
 - with illness onset during 6/19/2020–present
- 789 cases from 47 states
- Isolation dates: 6/20/2020 – 8/3/2020
- Reported onset dates (n=353): 6/19/2020 – 7/26/2020

Table 2. Patient demographics in *Salmonella*Newport cluster 2007MLJJP-1, as of August 12, 2020

| Demographics | |
|---------------------------------|------------|
| Age range (median), (n=786) | 0-102 (40) |
| Age categories in years (n=786) | n (%) |
| <5 | 16 (2) |
| 5 to 17 | 40 (5) |
| 18 to 59 | 560 (71) |
| ≥60 | 170 (22) |
| Sex (n=774) | n(%) |
| Female | 427 (55) |

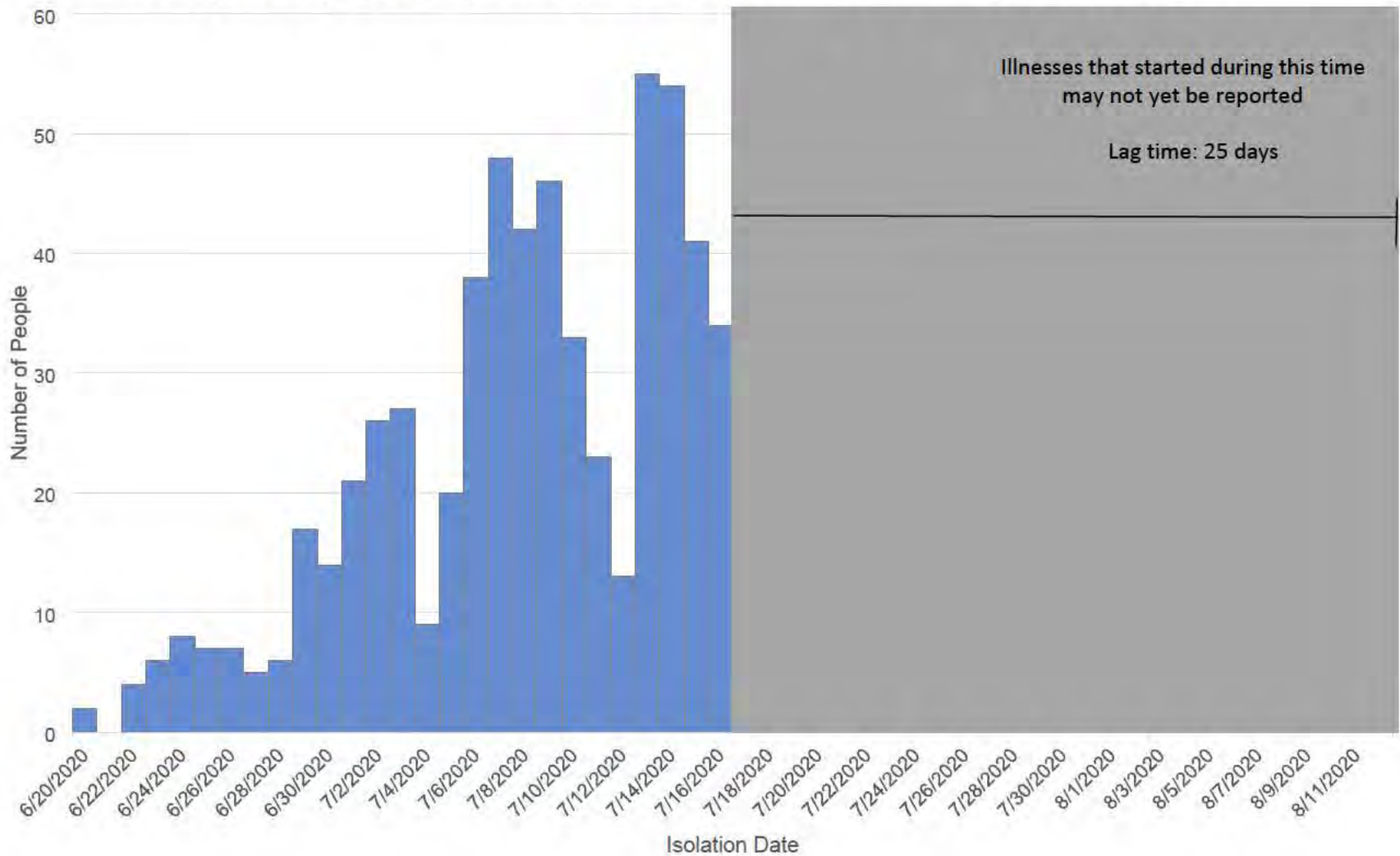
Table 3. Patient outcomes in *Salmonella*Newport cluster 2007MLJJP-1, as of August 12, 2020

| Outcomes | n (%) |
|----------------------|---------|
| Hospitalized (n=370) | 94 (25) |
| Died (n=363) | 0 (0) |

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People infected with the outbreak strain of **Salmonella** Newport by date of sample isolation* as of August 12th, 2020



*n = 789

(FIGURE) For Official Use Only

Information for internal use only; not for distribution. Data are preliminary and subject to change***

WGS Information on Cluster

- All cases highly related at 0-6 alleles by cgMLST.
- Cluster is related (5 alleles) to 2 isolates from the historical cluster 1509MLJJP-1 (no vehicle identified)
- NCBI Pathogen Detection Pipeline shows international clinical matches from the UK and almond isolate matches within 14 SNPs.
- Canada reports matches by sequencing
- Cluster 2007MLJJP-1 is >2,000 alleles apart from 2006MLJJP-1

Exposures from HGQ (v1) as of August 12, 2020

- 97/130 (75%) onions
 - 32 white, 31 red, 20 yellow, 32 unspecified
 - 108/130 (83%) if including likely onion-containing dishes
- 110/130 (85%) leafy greens
 - 53 iceberg, 47 romaine
- 65/130 (50%) cilantro
- 96/130 (74%) tomatoes
 - 29 cherry/grape, 22 red round, 19 roma, 14 vine, 29 unspecified

Exposures from HGQ (v2) as of August 12, 2020

- 12/12 (100%) onions
 - 7 (58%) red
 - 10/12 (83%) yes/maybe red
 - 6 (50%) white
 - 10/12 (83%) yes/maybe white
 - 4 (33%) yellow
 - 6/12 (50%) yes/maybe yellow
- 9/12 (75%) leafy greens
- 7/12 (58%) cilantro
- 8/12 (67%) tomatoes

Subcluster Exposures as of August 12, 2020

- 26 subclusters identified from 9 states
 - 25 with info provided to CDC
- 21 with complete onion info
 - 21/21 any onion
 - 15/21 multiple onion types
 - 16/21 red onions
 - 12/21 yellow onions
 - 10/21 white onions

| | White onions | Yellow onions | Red onions |
|------------|--------------|---------------|------------|
| Subcluster | | | |
| AZ-01 | | X | X |
| CA-01 | X | | X |
| CA-02 | | X | |
| CA-04 | X | | |
| CA-05 | X | X | X |
| IL-02 | | | X |
| MI-01 | X | X | |
| MI-02 | X | X | X |
| MI-04 | X | X | |
| MI-06 | X | X | |
| MT-01 | | | X |
| MT-03 | | | X |
| ND-01 | | | X |
| OR-01 | | X | X |
| OR-02 | | X | X |
| OR-04 | X | | X |
| OR-05 | X | | X |
| OR-06 | | X | X |
| UT-01 | X | | X |
| UT-03 | | X | X |
| WY-01 | | X | X |

CRT3 Meeting Minutes*Salmonella* Newport/Unknown/Jul 2020

| | |
|-----------------------|--|
| Meeting Title: | Sysco Precall |
| Date/Time: | 07/30/20, 11:00am ET |
| Facilitator: | CORE |
| Attendees: | ORA: 3W, SERCS, DDHAFO, PSN; CFSAN: OC, OFS, IAS, OAO, CORE; OC: OCC; CDC; CFIA, PHAC |
| Purpose: | To discuss talking points and identify speakers for the upcoming firm call with Sysco (b)(4), TX). |

Items Discussed:**Agenda for Pre-call:**

- Roll Call
- General situational awareness updates
 - 8 subclusters supplied by Sysco. We've received records related to the Canadian traceback, but US records are still pending. Canada is planning on public communications.
 - 3W had a meeting with Sysco this morning to explain purpose of call and agenda. Explained 4 agencies. Discussion regarding public comms
 - Sysco has pushback and apprehension wanted to know if they would be named
 - Kari got a heads-up phone call from Sysco last night. Sysco felt like they only knew of one subcluster associated with Sysco.
- Proposed agenda
 - Introductions
 - Canadian outbreak investigation overview
 - i. PHAC epidemiology update
 - ii. CFIA regulatory update
 - US outbreak investigation overview
 - i. CDC epidemiology update
 - ii. FDA traceback update
 - Discussion regarding public communication
- Talking points
 - PHAC
 - i. 115 confirmed cases. Number of case clusters at restaurants and living facilities. Onions, tomatoes, leafy greens have been id'd as common food. Red Onions have been id'd as likely source. Red onions were supplied by Sysco, no similarities among other food items.
 - CFIA
 - i. May make formal recall request of product sent to Canada. Or at least an indication that it is in the works. If recall, then Sysco would be named publicly. (*OCC doesn't think it's an issue to name suppliers later because we are not naming sysco in our press release)

CRT3 Meeting Minutes

Salmonella Newport/Unknown/Jul 2020

- CDC
 - i. 396 ill in 36 states. High proportion list onions. Will send slides. Red onion only item in common among subclusters. Outbreak is moving fast. Will issue CDC Food Safety Alert.
- FDA
 - i. FDA is tracing 14 subclusters as a part of US investigation. Some did not receive product from sysco. Eight subclusters did received product from Sysco. Products Onion, Tomatoes, and Cilantro. Imperial Fresh brand onions 25# bag. We do have information pending for additional subclusters. Some subclusters may drop off or be added based on information we receive.
- Communications
 - i. PHAC
 - i.1. In order to prevent further illness preparing to issue an advisory to not eat, sell, or use onions imported from the US.
 - ii. CFIA
 - ii.1. May have to have a food lines about the investigation is ongoing.
 - iii. CDC
 - iii.1. Planning to follow Canada's advice around not eating, selling, using red onions from the US following Canada's advice
 - iv. FDA
 - iv.1. Planning to put out outbreak advisory following Canada's advice. Investigation is ongoing.
- Anticipated questions from firm & federal responses
 - (b) (5)
- Questions to Sysco
 - Where are the onions grown/from for the timeframe of interest? Want to target any comms
 - Inquire if onions distributed to Canada were also distributed in the US market
 - How are onions held
- Identify speakers for the Firm Call
 - Jane will facilitate the call
 - FDA –
 - i. CORE – Evelyn Pereira, Corinne Newhart, Dr. Stic Harris
 - ii. Office of Food Safety – Mary Tijerina, Patricia Homola
 - iii. Office of Compliance – Thomas Kuntz
 - iv. Office of Chief Counsel – Alexandra Jabs
 - CDC –
 - i. CDR Laura Gieraltowski, CDR Matt Wise, Lauren Stevenson
 - PHAC –
 - i. April Hexemer

CRT3 Meeting Minutes

Salmonella Newport/Unknown/Jul 2020

- CFIA –
 - i. Ken Marcynuk
- Health Canada

CRT3 Meeting Minutes*Salmonella* Newport/Unknown/Jul 2020

| | |
|-----------------------|--|
| Meeting Title: | Sysco Firm Call |
| Date/Time: | 07/30/20, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | CORE, OC, PSN, OCC, 3W, DDHAFO, OFS, OAO, CDC, CFIA, PHAC, Sysco |
| Purpose: | To discuss the ongoing outbreak investigation with Sysco (b)(4) [REDACTED], TX). |

Items Discussed:

- 1) Introductions
 - a) Sysco
 - b) FDA
 - c) CDC
 - d) PHAC
 - e) CFIA
- 2) Canadian outbreak investigation overview
 - a) PHAC epidemiology update
 - a.i) Epi investigation id'd red onions as likely source. 80% report red onions expect 38% among population
 - a.ii) Red onions were received from sysco facilities. Same commonalties were not noted for other food items.
 - b) CFIA regulatory update
- 3) US outbreak investigation overview
 - a) CDC epidemiology update
 - a.i) Reviewed slides
 - b) FDA traceback update
 - b.i) Traceback investigation is ongoing. Tracing tomatoes, onions and cilantro. Tracing 14 subcluster. 6 did not get product from Sysco
- 4) Questions
 - a) Has CFIA reached out to suppliers? Not yet. Did have some retail stores that some ill people purchased onions
 - a.i) Sysco wants Canada to reach out to Onions 52 and thompson's international.
 - (a.i.1) FDA has reached out to Onions 52 on behalf of CFIA and got records late last night.
 - b) Will sysco be named or will it be a more general warning
 - b.i) Will id sysco independent operators and will say more may be named as investigation is ongoing. CFIA can share a draft with Sysco of comms
 - c) Has sysco looked at onions 52 and thompson's international for the US cases?
 - c.i) Onions 52 is coming up with some, but not all onion products (OR restaurant subclusters). All onions are grown and packed next to each other and in same sheds. Excluding subway, Onions52 is the main supplier
- 5) Discussion regarding public communication

(b) (5)

CRT3 Meeting Minutes

Salmonella Newport/Unknown/Jul 2020

(b) (5)

CRT3 Meeting Minutes*Salmonella* Newport/Red Onion (Suspect)/Jul 2020

| | |
|-----------------------|---|
| Meeting Title: | Onions 52 Precall |
| Date/Time: | 07/30/20, 4:15pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: 3W, 4W SERCS, DDHAFO, PSN; CFSAN: OC, OFS, IAS, OAO, CORE; OC: OCC; CDC; CFIA, PHAC |
| Purpose: | To discuss talking points and identify speakers for the upcoming firm call with Onions 52 (Syracuse, UT). |

Items Discussed:**Agenda for Pre-call:**

- Roll Call
- General situational awareness updates
 - Onions 52 supplied onions to Sysco. Onions 52 sells Thompson and Hartley
 - Onions 52 reached out to ORA HAF3W, they heard from Sysco they needed to call DAL-DO about an outbreak. FDA has an interest in obtaining info from them. Asked about whole vs sliced and diced
 - CFIA needs to know how product is packaged and identified
- Proposed agenda
 - Introductions
 - Canadian outbreak investigation overview
 - i. PHAC epidemiology update
 - ii. (b) (5)
 - ii. CFIA regulatory update
 - ii.1.
 - US outbreak investigation overview
 - i. CDC epidemiology update
 - ii. FDA traceback update
 - Discussion regarding public communication
- OC recalls will ask if the firm plans on taking any product actions at this time. 24 hours to respond to FDAs ask
 - CFIA reports the likely first shipment of interest was May 24.
 - Scoping back to the earliest illness onset date + some lag. Unless we have indication its all of their red onions in exp.
 - CDC's first illness onset is 6/19/20, Canada is 6/15/20
- Communications
 - i. PHAC
 - i.1. Will issue public advisory this evening
 - ii. CFIA
 - iii. CDC

CRT3 Meeting Minutes

Salmonella Newport/Red Onion (Suspect)/Jul 2020

iv. FDA

iv.1. (b)(5)

- Anticipated questions from firm & federal responses
- Questions to Onions 52
 - Where were the onions grown that were supplied to the market between may and present
 - Comingling
 - Packaging
 - Who else they pack for
 - Ask about their business model
 - Exclusive suppliers or sell to others
 -
- Identify speakers for the Firm Call
 - CORE will facilitate the call
 - FDA –
 - i. CORE – Evelyn Pereira, Doug Karas, Dr. Stic Harris
 - ii. Office of Food Safety – Mary Tijerina, Patricia Homola
 - iii. Office of Compliance – Kathy Darlington
 - iv. Office of Chief Counsel – Alexandra Jabs
 - CDC –
 - i. CDR Laura Gieraltowski, CDR Matt Wise, Lauren Stevenson
 - PHAC –
 - i. April Hexemer
 - CFIA –
 - i. Ken Marcynuk

CRT3 Meeting Minutes*Salmonella* Newport/Red Onions (Suspect)/Jul 2020

| | |
|-----------------------|---|
| Meeting Title: | Onions 52 Firm Call |
| Date/Time: | 07/30/20, 5:00pm ET |
| Facilitator: | CORE |
| Attendees: | CORE, OC, OCC, 3W, 4W, DDHAFO, OFS, OAO, OSPOP Recalls, IAS, CDC, CFIA, PHAC, Onions 52 |
| Purpose: | To discuss the ongoing outbreak investigation with Onions 52. |

Items Discussed:

- 1) Introductions
 - a) Onions 52
 - b) FDA
 - c) CDC
 - d) PHAC
 - e) CFIA
- 2) Canadian outbreak investigation overview
 - a) PHAC epidemiology update
 - a.i) Epi investigation id'd red onions as likely source. 80% report red onions expect 38.5% among population
 - a.ii) Red onions were received from Sysco facilities. The same commonalties were not noted for other food items.
 - a.iii) Grocery store purchases were not supplied by Sysco.
 - b) Questions
 - b.i) What grocery store chain? Most commonly reported Save-On-Food
 - b.ii) What providence? More western providences, mostly BC
 - b.iii) Outbreak Providences? Shared case count by Providences
 - b.iv) Soby and Lablaw grocery stores have been reported
 - c) CFIA regulatory update
 - c.i) Still investigating
 - c.ii) PHAC risk assessment says red onions sold through Sysco are a high risk so proceeding with class 1 recall tonight
 - d) Questions
 - d.i) Have you done testing? Strong epi evidence
 - d.ii) How is it a class 1 risk? Salmonella in a ready to eat food or food eaten raw is a class 1 risk
 - d.iii) PHAC has been investigating last week. Cases were eating at restaurants where they were reporting burgers. Were perusing understanding toppings on burgers. It was determined that it was likely red onions.
 - d.iv) Processed onions? No, invoices indicate whole onions
 - d.v) Testing? There are a few samples in the lab and not representative of all of the onions on the market. Don't always rely on direct product testing
 - d.vi) Stic explained outbreak investigation process

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Salmonella Newport/Red Onions (Suspect)/Jul 2020

- 3) US outbreak investigation overview
 - a) CDC epidemiology update
 - a.i) Reviewed slides
 - a.ii) 396 ill in the US
 - a.iii) Explained restaurant subclusters – 22 illness sub cluster in the US (2-7 illnesses per cluster)
 - a.iv) Issuing a food safety alert tomorrow advising not to eat red onions
 - b) Questions
 - b.i) Was mostly in restaurants or at home/retail? Most of the subclusters are restaurant locations
 - c) FDA traceback update
 - c.i) Traceback investigation is ongoing. Tracing tomatoes, onions and cilantro. Tracing 14 subcluster. 6 did not get product from Sysco, but still working to ID their supply chain. 8 subclusters did receive onions from Sysco, 6 specifically received red onions. Onions 52 was identified as the common supplier to these sub clusters
 - c.ii) Questions
 - (c.ii.1) Can onions carry salmonella?
 - (c.ii.2) Can they know the POSs? No, they will need to go to Sysco for this information
 - (c.ii.3) Has Sysco identified any supplier that was no onions 52? CFIA says only if there was (b) (4)
 - (c.ii.4) From 5/24- present (b) (4) and mostly from (b) (4) onions up to 6/1. Since June they've been coming from Thompson in California
 - (c.ii.4.a) Thompson sells to other accounts besides Sysco, mostly (b) (4)
 - (c.ii.4.a.i) First red onion shipped from CA
 - (c.ii.4.a.ii) Supplied wholesalers in (b) (4)
 - (c.ii.5) Overview of Onions 52 business model
 - (c.ii.5.a) Grow, pack, and ship onions 52 weeks/year. Grow in Washington, ID, UT, OR, CA, NM
 - (c.ii.5.b) Sell to US and Canada
 - (c.ii.5.c) Thompson - Grower/Shipper in CA. 30-day program ship out of facility and distribute to shed in Bakersfield. Ship Late may – early august. Have outside growers that grow in partnership. Thompson workers harvest product and cure in facility for several days/weeks before packing. Ship to North America through different vendors but mostly onions 52. Red, white, and yellow are grown in same field. Share same equipment. Swabbed and had product samples tested all results were negative
 - (c.ii.5.d) Did overhead watering with well and surface water this year
 - (c.ii.5.e) No impacts from COVID
 - c.iii) Recall Ask

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- (c.iii.1) Swab tested packing lines and sent product sample of red, white, and yellow and watermelon. All were negative.
- (c.iii.2) Were onion samples from same fields of interest? From fields in CA
- (c.iii.3) The fields were completed several weeks ago that would have been the first onions have been gone for several weeks.
- (c.iii.4) How much is likely still on the market? Probably not much, summer onions do last
- (c.iii.5) FDA's ask will stay for a product action to get the product off the shelf

4) Discussion regarding public communication

(b)(5)

CRT3 Meeting Minutes*Salmonella* Newport/Red Onion (suspect)/Jul 2020

| | |
|-----------------------|--|
| Meeting Title: | SPTC #1 |
| Date/Time: | 07/31/20, 7:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 5W, DHAFO, PSN, ORS; CFSAN: OC, CORE; CDPH, CDFA |
| Purpose: | To discuss assignment for Thompson International Inc. |

Items Discussed:

1. Recall overview of what is expected
2. Comms overview
 - a. CDC's isn't live yet
3. CORE Leadership – Situation Overview
 - a. Concerned with lack of forthcomingness from the firm. Can we get boots on the ground sooner than next week.
4. Who is going out? FDA, CDPH, CA RRT
 - a. Questions
 - a.i. Water samples
 - a.i.1. Sediment or filtration
 - a.ii. Ask where the fields are
 - a.iii. If and who can get out there this weekend
 - a.iii.1. CDPH is behind the curve. Would need to get approval from mgmt. lab isn't prepared to take samples. Will not be able to get staff there this weekend
 - a.iii.2. 5W – Can start with PSN and support maybe not to Wednesday. Mentioned that this could delay recall because company is working on limited staff.
 - a.iii.2.a. Can offer support to PSN, but cant lead
 - a.iii.2.b. POC
 - a.iii.3. CDFA – can assist, but not lead
 - a.iv. Env sampling, raw onion collection should be initial focus
 - a.v. ORA/ORS will ID lab that can take samples
 - a.vi. Assignment needs to be issued Sunday, early is better
 - a.vii. Need eric brown and Rebecca bell
 - a.viii. Contact mike Mahovic or Samir
 - a.ix. Food contact surface sampling zone 1, 2, 3; water sampling of canal and reservoirs at fields
 - a.x. If staff gets out there and cant do recall and env at same time
 - a.x.1. Not our problem if they cant shadow sample us
 - a.xi. CDFA and CDPH do not know who owns the canal. Will likely need to get permission to sample
 - a.xi.1. CDFA will reach out to water district

CRT3 Meeting Minutes*Salmonella* Newport/Red Onion (suspect)/Jul 2020

| | |
|---|---|
| Meeting Title: | Tactics #2 |
| Date/Time: | 07/31/20, 2:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 5E, 6E, 1W, 2W, 3W, 4W, 5W, 6W, SERCs, DHAFO, PSN, ORS, OSPOP, LAO; CFSAN: OC, OFS, IAS, OAO, CORE; OCC, OEO; CDC; CFIA, PHAC; AK, CA, IL, IN, MD, MI, MN, MO, ND, NE, NY, OH, OR, TN, UT, VA, WA, WI, WV |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 508 cases in 39 states
 - 6/19-7/19/20 onsets
- Collaborate with Canadian Food Inspection Agency and Public Health Agency of Canada to obtain updates to their epidemiologic information, product sampling results, and traceback investigation.
 - PHAC: 114 cases in 5 providences, 6/15-7/18 onset, 15 clusters
 - CFIA: Recall from sysco in western Canada. Sysco sells directly online to consumers in ON. Investigating process in Vancouver that imports from same company as sysco.
- Coordinate traceback activities and collaborate with investigational partners to evaluate additional clusters for potential traceback investigations.
 - Product flow diagram was reviewed
 - CDPH say (b)(4) leg is getting worse as they go further into it. FDA may remove it as a subcluster due to poor records
 - OR reports many cases shopping at (b)(4)
- Collaborate with Office of Regulatory Affairs Human and Animal Foods 1E (NWE-DO) to develop a traceback information request for Subway (b)(4) (CT).
 - Received records. All locations appear to be 1 off exposure minus MI. Named (b)(4) farms as source for onions, not seeing it elsewhere. Sysco doesn't supply to all subways and those it does were specifically branded for subway.

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Salmonella Newport/Red Onion (suspect)/Jul 2020

- Follow up with Office of Regulatory Affairs Human and Animal Foods 3W (DAL-DO) on eNSpect Assignment #167287 for record collection from Sysco (b)(4), TX.
 - Received records from Sysco. Still expecting some information. Sysco can provide records on the lots that were distributed
 - Held firm call with sysco yesterday, prior to Canada webpostings.
- Follow up with Office of Regulatory Affairs Human and Animal Foods 4W and 5W (DEN-DO, SAN-DO) and Office of Regulatory Affairs Produce Safety Network regarding potential assignment for an inspection and record collection at Thomson International Inc (Bakersfield, CA).
 - Thomson is packer and farm implicated in our investigation.
 - Intending to initiate a voluntary recall. Requesting epi summary and traceback summary to help them understand how they are tied to the outbreak. Will recall all varieties of onions shipped 5/26-present (all shipments out of Bakersfield location to sysco).
 - 1st shipment from (b) (4) onions was earlier, not going to recall these because didn't go to sysco and have (b) (4).
 - Want explanation on states/providences they don't ship product to MB, ME.
 - Have product in warehouse in Canada they want to test.
 - Inspection at Thomson.
 - PSN can coordinate per usual. Need to talk to SMEs to see if need to expand past secondary activities farm.
 - Mission critical designation – OC can coordinate it through Bill Correll.
 - Timing: sometime next week to get it pulled together
 - Collecting samples of recalled product.
 - OC says samples can be regulatory
 - Glen Bass wants more discussion before collecting samples.
 - OC recalls says they can be research samples.
 - CDPH asks about what Thomson is doing in the Bakersfield facility
 - 5W says ceasing operations and shipping activities
 - 5 fields in Bakersfield. Each field has different varieties of onions.
 - Firm indicated they have a very specific traceability program and can tie to variety of onions
- Represent FDA on CDC-facilitated States calls, the Canadian Outbreak Investigation Coordinating Committee call, and Industry calls.
 - Held industry call today with FDA, CDC, CFIA, PHAC letting industry know comms likely to come out
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.
 - CORE is preparing to issue web post. In clearance now.
 - CDC is working on getting investigation notice updated today. Want recall notice, but if recall isn't done today they will go out with broader advice.

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Salmonella Newport/Red Onion (suspect)/Jul 2020

- PHAC no plans
- CFIA might issue additional recall warning updates if new recalls
- States: CA – no press, OR likely to issue press.
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [Salmonella Newport/Red Onion \(suspect\)/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training.

CRT3 Meeting Minutes*Salmonella Newport/Red Onion/Jul 2020*

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|--|---------------------------------------|
| Meeting Title: | SPTC #2 |
| Date/Time: | 08/14/20, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: DHAFO, PSN; CFSAN: OC, OFS, CORE |
| Purpose: Discuss observations identified during the Thomson International Inc Root Cause Investigation. | |

Items Discussed:

1. PSN Update from Thomson International, Inc.
 - a. Concerns:
 - i. Buildings not fully enclosed to protect from animals soiling equipment
 - ii. Inadequate measures against pest control (cat, pigeons, scat) and for equipment cleaning
 - iii. Multiple SOPs contradict (no record of training of employees) and lack of coordination within organization
 - b. Water samples (pending results)
2. Produce Safety Rule
 - a. Discussed Forms 4056 and 484
 - b. Verbal vs. written issuance
3. Review documents and edit
 - a.
 - b.
4. Questions
 - A. (b) (4) Onion tail water usage
 - i.
 - ii. Investigating water event's relation to onion contamination
 - iii. Field harvested onions in (b) (4)
 - iv. Shipments in traceback show harvest date (b) (4) Rationale: Can't rule out contamination by timing.
 - B. Sanitation Records
 - i. Records must reflect reality
 - C. Was fertilizer with poultry pellets used? No
 - D. What prompted the usage of sanitizer in the water?
 - i. Firm uses (b) (4)
(b) (4)
 - ii. No direct usage of sanitizer in the water
 - E. Are chemicals being used according with the label? Not confirmed
 - F. Water Treatment complying with EPA rule
 - i. Not FDA jurisdiction but water treatment has to be used according to the label

CRT3 Meeting Minutes

Salmonella Newport/Red Onion/Jul 2020

- G. Harvest measures
 - i. Either mechanical or by hand
 - ii. PSN will summarize harvesting observations and share with group
- 5. Assignment responses
 - A. PSN will follow-up in writing once organized
 - B. Issue assignments to Holtville
 - i. Red onions grown at Holtville were packed in Bakersfield or other packing facility
 - ii. Planning to issue new assignment for Holtville (draft assignment based on previous Bakersfield assignment)
 - iii. Volunteers will be contacted about forming groups to investigate Holtville. Due to COVID conditions, working with volunteers on outbreaks back to back (*Cyclospora* then *S. Newport*).
- 6. Next Steps:
 - A. PSN will schedule another call to follow up on questions and recommendations

CRT3 Meeting Minutes*Salmonella* Newport/Red onion (suspect)/Jul 2020

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|---|---|
| Meeting Title: | Tactics #3 |
| Date/Time: | 08/07/2020, 2:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 5E, 6E, 1W, 2W, 4W, 5W, 6W, SERCs, DHAFO, PSN, ORS, OSPOP, LAO; OCI; CFSAN: OC, OFS, OAO, CORE; OCC, OEO; CDC; FSIS; CFIA, PHAC; AZ, CA, IL, IA, MI, MN, MO, ND, NY, OR, TN, UT, VA, WA, WI, WV |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 701 cases in 46 states (around 40 uploads per day)
 - 6/19-7/19/20 onset dates
 - White, Yellow, Red onion types

- Collaborate with Canadian Food Inspection Agency and Public Health Agency of Canada to obtain updates to their epidemiologic information, product sampling results, and traceback investigation.
 - PHAC: 239 cases in 7 providences, 6/15-7/22 onset dates, 29 hospitalized, 0 deaths, Red Onion continuously reported
 - CFIA: Recall updates. Working through secondary products and anticipate more products under recall. Samples from senior living facilities have been undetected for Salmonella (pending more results).

- Coordinate traceback activities and collaborate with investigational partners to evaluate additional clusters for potential traceback investigations.
 - Traceback diagram was reviewed
 - Noted (b)(4) grows berries, not onions
 - One field cannot supply majority of US and Canada but packing house could be the commonality
 - Investigate (b)(4)' relationship with Onions 52

CRT3 Meeting Minutes

Salmonella Newport/Red onion (suspect)/Jul 2020

- Michigan cluster of yellow onions being reported (requesting additional information from Thomson International)
- Monitoring CDPH's Traceback leg
- Possible onion shortage's linkage to increased export of onions to Central America
- OR didn't receive samples from (b)(4) of interest
- Follow up with Office of Regulatory Affairs Human and Animal Foods 3W (DAL-DO) on eNSpect Assignment #167287 for record collection from Sysco (b)(4), TX).
- Follow up with Office of Regulatory Affairs Human and Animal Foods 5W (SAN-DO) and Office of Regulatory Affairs Produce Safety Network regarding assignments FACTS #12055268 and FACTS #12055297 for Root Cause Investigation and record collection at Thomson International Inc (Bakersfield, CA).
 - Team 1
 - Collected environmental samples (2). Negative results
 - Noted animal activity within and around the packing facilities
 - Team 2
 - Revisited same locations as Team 1
 - Noted sanitation concerns
 - Reviewed (b) (4) connection
 - SOPs didn't correlate with packing facility protocol
 - Collected onion samples (pending results)
 - Teams 2A & 2B formed to inspect fields, growing practices, water usage
 - Scat samples appear to be mammalian
 - Packing lines (b) (4)
- Follow up with Office of Regulatory Affairs Office of Regulatory Science regarding samples #1145760, #1145761, and #1141449.
 - Lab samples are pending results
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.
 - CORE updated case counts and included additional recalls
 - CDC updated outbreak notices with additional recalls and locations
 - PHAC will be updating Public Health Notice
 - CFIA: no plan
 - States: no plan

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Salmonella Newport/Red onion (suspect)/Jul 2020

- Represent FDA on CDC-facilitated States calls, the Canadian Outbreak Investigation Coordinating Committee call, and Industry calls.
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [*Salmonella* Newport/Red Onion \(suspect\)/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training. <https://www.surveymonkey.com/r/NXR RM2Q>

CRT3 Meeting Minutes*Salmonella* Newport/Red onion/Jul 2020

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|---|--|
| Meeting Title: | Tactics #4 |
| Date/Time: | 08/14/2020, 2:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 5E, 6E, 1W, 3W, 4W, 5W, 6W, SERCs, DHAFO, PSN, DIO, ORS, OSPOP, OCI; CFSAN: OC, OFS, OAO, CORE; OEO; CDC; FSIS; CFIA, PHAC; AZ, IL, MI, MN, MT, ND, OR, PA, TN, UT, WA, WI, WV |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 850 cases from 47 states
 - 06/19-07/26/20 onset dates
 - 108/133 confirmed onion exposures
 - From questionnaire, majority report eating multiple types on onions
 - 26 subclusters
- Collaborate with Canadian Food Inspection Agency and Public Health Agency of Canada to obtain updates to their epidemiologic information, product sampling results, and traceback investigation.
 - 339 cases in 7 provinces, majority in Western Canada
 - 06/15/-07/2/20 onset dates
 - 07/27/20 isolation date
 - 133/154 report red onion exposure in restaurants and grocery store
 - Updating Public Health Notice to reflect case count

A. CFIA

- i. Post recalls for secondary products (for example, fresh salsa)
- ii. Identify fields associated with Thomson International? → Field-level traceback not available

CRT3 Meeting Minutes

Salmonella Newport/Red onion/Jul 2020

iii. (b) (4) Subway traced back (Subway (b) (4))

- Coordinate traceback activities and collaborate with investigational partners to evaluate additional clusters for potential traceback investigations.
 - Added (b) (4) to diagram
 - Additional clusters?
 - MI → working to investigate cluster in (b) (4) White and yellow onions reported. Will conduct record collection.
 - (b) (4) background and connection to traceback (PSN will contact investigation team to follow up)
- Follow up with Office of Regulatory Affairs Human and Animal Foods 6E (CHI-DO) regarding an assignment for record collection from (b)(4), IL).
 - Continue attempts for collection via phone and email
 - Once received, update traceback diagram as needed
- Follow up with Office of Regulatory Affairs Human and Animal Foods 5W (SAN-DO) and Office of Regulatory Affairs Produce Safety Network regarding assignment FACTS #12055297 for Root Cause Investigation and record collection at Thomson International Inc (Bakersfield, CA).
 - Evaluating records
 - Deciding on determinations in either written or verbal
 - Concerns for pest, employee training, and sanitation
 - Holtville investigation pending since it's confirmed that onions grown in Holtville were packed/processed at Bakersville packing facility and shipped to customers
 - Will share assignment with SMEs but will be using template for Bakersfield's assignment
- Follow up with Office of Regulatory Affairs Office of Regulatory Science regarding samples #1145623, #1145624.
 - Pending results
 - No validated method for Salmonella filtration analyses
 - Suggest better way to collect water samples in future
- A. Thoughts on the need for more onion samples?
 - Office of Compliance - interested in sampling as many onions as possible from the implicated timeframe and/or recall
 - Produce Safety Network - investigators sampled all lots of onions available in Bakersfield
 - Considering Sysco onions previously collected or other onions to use for more sampling
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.

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- CORE:
 - Monitoring downstream recalls.
 - Notices updated yesterday with secondary products affected by recall.
 - Major recalls page released to post downstream recalls
- CDC: updated posts and case count update will be next week.
- CDPH: no updates
- CFIA: no updates
- States: no updates
- Represent FDA on CDC-facilitated States calls, the Canadian Outbreak Investigation Coordinating Committee call, and Industry calls.
 - CDC- no plans
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [Salmonella Newport/Red Onion/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training.
<https://www.surveymonkey.com/r/NXRRM2Q>

CRT3 Meeting Minutes*Salmonella* Newport/Red Onion/Jul 2020

| | |
|---|----------------------------|
| Meeting Title: | SPTC #5 |
| Date/Time: | 09/10/20, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: ORS; CFSAN: ORS, CORE |
| Purpose: Discuss laboratory methodology used to analyze the samples collected as part of the outbreak. | |

Items Discussed:

1. Overview of samples
 - a) Sampling assignments sent as part of investigations
 - b) 26 samples collected from Thomson Intl. Bakersfield (all negative)
 - c) 25 samples collected from Thomson Intl. Holtville (10 positive for *Salmonella* but WGS pending)
 - d) 52 product samples collected from distribution centers (all negative)
2. ORA ORS
 - a) Onion samples analyzed with Trypticase Soy Broth (TSB)
 - b) Environmental samples
 - a.i. Lactose Broth (LB) was used for environmental samples (sampling recommendations were changed)
 - a.ii. Sediment and water samples were spiked
 - a.iii. Mix of 2004.03 and 2011.03 methods with swab type samples
 - a.iv. Mix of spiked samples with the VIDAS method
 - c) Scat samples
 - a.i. Scat samples were spiked
3. CFSAN ORS
 - a) Onion samples
 - i. Inhibitory test on *Salmonella* growth
 - ii. Found Trypticase Soy Broth (TSB) worked well
 - b) Environmental samples
 - c) Scat samples
4. Methodology
 - a) Sampling guidance was changed amidst analyses
 - b) Discussed ways to document changes/recommendations via Sharepoint, etc..
 - c) Ensure offices are operating from the most recent guidance
 - d) Advised to separate assignments from methodologies
 - e) CFSAN ORS would like feedback from analysts to improve effectiveness

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- f) Supported open lines of communication between ORA ORS and CFSAN ORS for best practices
- 5. Updates for remaining isolates
 - a) 8 isolates from 754 sample pending WGS
 - b) 31 isolates from 755 sample pending WGS
 - c) For the 4 positive samples, WGS should be confirmed next week

CRT3 Meeting Minutes*Salmonella* Newport/Red onion/Jul 2020

| | |
|---|--|
| Meeting Title: | Tactics #5 |
| Date/Time: | 08/25/2020, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 4E, 1W, 2W, 3W, 4W, 5W, 6W, DHAFO, PSN, DIO, ORS, OSPOP, ORA OE, LAO, OCI; CFSAN: OC, OFS, OAO, OOA, ORS, DPS, OCC, OEO, CORE; CDC; FSIS; CFIA, PHAC; IL, MD, MN, MT, ND, OR, UT, WA, WI, WV |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 993 cases from 47 states, onset dates 06/19 - 08/3/20 (investigating one case with 08/14/20 onset date)
 - Decline in reports of cases
 - Cases are related 0-6 alleles by cgMLST
 - Analyzed 300 responses to questionnaire (80% identified onions)
 - 34 sub clusters (31 from restaurants, 3 from grocery stores)

- Collaborate with Canadian Food Inspection Agency and Public Health Agency of Canada to obtain updates to their epidemiologic information, product sampling results, and traceback investigation.
 - A. CFIA
 - Cases appear to be slowing down
 - No updates
 - No food safety warnings updated recently
 - Observing possible exposures
 - B. PHAC

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Salmonella Newport/Red onion/Jul 2020

- 395 cases, latest onset date is 08/07/20, most exposures are from restaurants or living facilities
 - Updated public health notice, decline in confirmed cases
 - 1 sample of recalled onion (Onions 52 from Costco) pending analysis
 - Next meeting is on Thursday
-
- Coordinate traceback activities and collaborate with investigational partners to evaluate additional clusters for potential traceback investigations.
 - Follow up with Office of Regulatory Affairs Human and Animal Foods 5W (SAN-DO) and Office of Regulatory Affairs Produce Safety Network regarding assignment FACTS #12055297 for investigation and record collection at Thomson International Inc (Bakersfield, CA).
 - Preparing to do close out on Wednesday or Thursday of this week at Bakersfield. Finalizing details for the close out meeting
 - Coordinate with Office of Regulatory Affairs Human and Animal Foods 5W (SAN-DO/LOS-DO) and Office of Regulatory Affairs Produce Safety Network regarding an assignment for Root Cause Investigation at Thomson International, Inc. (Holtville, CA).
 - Completed environmental sampling of cooling area
 - Visited Pepper 22A field for sprinkler
 - Completed ultra-filtration sample
 - Provided firm with a 484
 - No more sampling locations to visit and no more samples to acquire
 - One sample # was duplicated because of how it was keyed in the system. Corrections are pending
 - Any issues the investigators obviously noted? No, not to their understanding
 - Follow up with Office of Regulatory Affairs Human and Animal Foods 4W (DEN-DO) and 1E (NYK-DO) regarding sample collection assignments FACTS# 12061017 and FACTS# 12061168 at Sysco (b)(4), UT) and Sysco (b)(4), NY).
 - A. DEN-DO
 - Sampling team is collecting 6 samples from 3 remaining item numbers. Issue 484 and close out afterwards
 - B. NYK-DO
 - Plan on collecting 16 samples for submission
 - Ability to use 702b portions depends on if sample is perishable. Can the lab convert 702b portions to samples? Response pending
 - Offices will work together on perishability of onions and legal usage of 702b portions

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Salmonella Newport/Red onion/Jul 2020

- Who's responsible for reporting results from 702b samples? Who to report to (Thomson, Sysco, or both)? Will follow up
- Follow up with Office of Regulatory Affairs Office of Regulatory Science and Center for Food Safety and Applied Nutrition Office of Regulatory Science regarding presumptive and pending samples.
 - Original ultra-filtration samples did not arrive in expected timeframe and were potentially compromised while sitting at elevated temperatures. Samples are being processed
 - Best case scenario, presumptive positive samples will be confirmed on Friday. Results from WGS will be ready on Monday with the latest being Tuesday. No updates on other pending samples.
 - Some onions at Holtville were not subject to the recall (harvest dates were before Bakersfield). Only fresh harvested bulb onions (none are frozen) are of concern.
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.
 - If lab results are positive, communication strategy will change
- Represent FDA on CDC-facilitated States calls, the Canadian Outbreak Investigation Coordinating Committee call, and Industry calls.
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [Salmonella Newport/Red Onion/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training. <https://www.surveymonkey.com/r/NXR RM2Q>

CRT3 Meeting Minutes*Salmonella* Newport/Red onion/Jul 2020

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|---|--|
| Meeting Title: | Tactics #6 |
| Date/Time: | 09/01/2020, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 4E, 5E, 3W, 4W, 5W, 6W, OHAFO, DHAFO, PSN, DIO, ORS, LAO, OCI; CFSAN: OC, OFS, IAS, OAO, ORS, DPS, OCC, OEO, CORE; CDC; FSIS; CFIA, PHAC; CA, IA, IL, IN, KS, MD, MI, MN, MT, OR, UT, VA, WI |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 1,023 cases from 47 states
 - 7 new additions over weekend
 - 08/18/20 is the latest isolation date
 - 06/19-08/03/20 onset dates
 - 0-6 cgMLST
 - 34 sub clusters from 13 states
- Collaborate with Canadian Food Inspection Agency and Public Health Agency of Canada to obtain updates to their epidemiologic information, product sampling results, and traceback investigation.
 - CFIA
 - No updates and completed traceback
 - PHAC
 - 457 confirmed cases
 - 7 provinces (majority in Alberta)
 - 08/11/20 is the latest isolation date
 - 2 reported deaths (one case is confirmed to not be linked to *Salmonella* outbreak and one case's cause of death is unknown)

CRT3 Meeting Minutes

Salmonella Newport/Red onion/Jul 2020

- Identified many links to Thomson International, Inc. onions
- Coordinate with Office of Regulatory Affairs Human and Animal Foods 5W (SAN-DO/LOS-DO) and Office of Regulatory Affairs Produce Safety Network regarding assignment FACTS# 12060391 for an investigation at Thomson International, Inc. (Holtville, CA).
 - No updates
 - Working on reports and will share with CORE once complete
 - Thomson investigation in Holtville, CA closed on 08/24/20
 - Thomson investigation in Bakersfield, CA closed on 08/27/20
- Follow up with Office of Regulatory Affairs Office of Regulatory Science and Center for Food Safety and Applied Nutrition Office of Regulatory Science and Office of Analytics and Outreach regarding presumptive and pending sample results and WGS analysis.
 - In total, 113 samples collected
 - CFSAN ORS
 - 2 Ultrafiltration samples are *Salmonella* positive (pending WGS), 5 Ultrafiltration samples are pending confirmation
 - ORA ORS
 - Product samples are pending completion.
 - From environmental samples (sediment, water, etc.), positive for *Salmonella* and several isolates submitted for WGS (6 do not match clinical outbreak)
 - 1 scat sample is pending confirmation
 - 20 samples pending WGS
 - Office of Analytics and Outreach
 - Waiting for one sample to be re-sequenced
 - Division of Produce Safety
 - Shared and discussed field map
 - Red onions were grown in lower half of Pepper 22A field and yellow onions were grown in upper half of Pepper 22A field
 - Yellow dots represent where sediment samples were collected
 - White dots represent where CRO, pending, or negative samples were collected
 - Holtville Eight Drain flows water from south to west to north. Provides drainage for 8 eight blocks, snaking through valley, collecting from production fields
 - Pepper Lateral flows irrigation water from east to west
 - Cattle farm that appears in compromising condition is nearby a drain of interest
 - Area is dry (no rain since February of this year). Average temperatures range 110-120° Fahrenheit
 - Elementary school and Hay Forage Site are north of fields
 - For Holtville, onions planted in October were harvested in May of this year
 - Office of Compliance: planning internal call to strategize plan
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.

CRT3 Meeting Minutes

Salmonella Newport/Red onion/Jul 2020

- FDA plans to update case counts
 - CDC plans to update case counts
 - CAN updated case counts yesterday
- Represent FDA on CDC-facilitated States calls, the Canadian Outbreak Investigation Coordinating Committee call, and Industry calls.
 - No plans
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [Salmonella Newport/Red Onion/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training.
<https://www.surveymonkey.com/r/NXR RM2Q>

CRT3 Meeting Minutes*Salmonella* Newport/Red onion/Jul 2020

| | |
|---|---|
| Meeting Title: | Tactics #7 |
| Date/Time: | 09/11/2020, 12:00pm ET |
| Facilitator: | CORE |
| Attendees: | ORA: HAF: 1E, 2E, 4E, 5E, 1W, 2W, 6W, OHAFO, DHAFO, PSN, ORS, CFSAN: OC, OFS, IAS, ORS, DPS, OCD, OCC, OEO, CORE; CDC; FSIS; CFIA, PHAC; CA, IL, MD, MI, MN, MT, NY, OR, UT, VA, WI |
| Purpose: To discuss proposed incident objectives and field activities to occur during the upcoming Operational Period. These incident objectives and activities will be reviewed to determine what has been accomplished to date and what additional work is needed. | |

Items Discussed:

- Collaborate with CDC to obtain epidemiologic information regarding any new cases, updates to exposure histories, and whole genome sequencing analyses.
 - 1,095 cases in 48 states
 - 06/20/20 - 08/25/20 onset dates
 - Related by 0-6 alleles cgMLST
 - From questionnaires, 66% reported red onions
 - No timeline on outbreak slowing down

- Collaborate with Public Health Agency of Canada to obtain updates to their epidemiologic information.
 - PHAC
 - 506 cases
 - Outbreak is slowing down
 - 08/16/20 is latest onset date
 - Long reporting delay
 - CFIA
 - No updates

CRT3 Meeting Minutes

Salmonella Newport/Red onion/Jul 2020

- Follow up with Office of Regulatory Affairs Office of Regulatory Science and Center for Food Safety and Applied Nutrition Office of Regulatory Science and Office of Analytics and Outreach regarding presumptive and pending sample results and WGS analysis.
 - WGS for water samples (multiple serotypes, with Newport being one of them) should be confirmed next week
 - WGS for 1 scat sample should be confirmed early next week
- Follow up with Center for Food Safety and Applied Nutrition Office of Food Safety, Office of Compliance, Office of Regulatory Affairs Produce Safety Network regarding an investigation at Thomson International, Inc. (Bakersfield, CA).
 - Requested need for more sample collection as part of ongoing concern
 - Collaboration between Office of Compliance and Office of Food Safety
 - Samples collected will be regulatory
 - CFSAN Office of Compliance will issue assignment
 - ORA Produce Safety Network will receive support for ultrafiltration water samples next week
 - Samples are expected to arrive at CFSAN Office of Regulatory Science
 - Currently, scope of assignment is incomplete
 - Division of Produce Safety discussion of map
 - Focused on sediment sample collection (interested in 10 UF water samples)
 - Plans for water collection also
 - Relationship between retention basin, etc..
 - Soil samples weren't collected. Water, sediment, product, and scat samples were collected
 - 1 scat sample appeared as Poly D, indicating that it is most likely not S. Newport
 - Discussed "Sep 2020 Suggested Environmental Sample Collection" document
 - Desire for water samples from (b) (4) to be re-done

CRT3 Meeting Minutes

Salmonella Newport/Red onion/Jul 2020

- Nearby (b) (4) is being noted for potential relationship
 - Product from Holtville went through Bakersfield facility
 - If positive match to outbreak strain in Holtville, suggested to not go to Bakersfield. This would not explain outbreak. Not all lots of interest, etc.. received product from Holtville
 - Possible to (b) (5)? Agreed but will follow-up with leadership. Will mobilize as if starting on Tuesday to avoid last minute haste.
 - Ensured CA still has people available to help.
- Coordinate with federal, state, and local communications partners to ensure appropriate messaging is provided related to this investigation.
 - No updates
- Disseminate incident related information to FDA stakeholders and facilitate the sharing of incident related information across partner agencies through FoodSHIELD [*Salmonella* Newport/Red Onion/Jul 2020](#)
- Solicit recommendations from investigation partners related to process improvements, food safety and preventive controls, research opportunities, and education/training.
<https://www.surveymonkey.com/r/NXRRM2Q>

Salmonella Newport Outbreak
associated with red onions - BC,
AB, SK, MB, ON, QC, PEI, USA –
2020-151

Updated: August 5, 2020

(b)(4)

(b)(4)

(b)(4)



Thomson Farms

- Fields based out of Bakersfield CA area
- Common processing, storage, packing out of Bakersfield CA.
- 30 day onion program on field
- Shipping from end of May through August (First Canadian onset associated with May 24th distributed product)
- Use outside growers in near-by fields as well as their own fields

- Harvest is done by one Thomson crew

Thompson Farm, CA

Onions 52

(b)(4)

Fresh Point

(b) (4)

(b) (4)

(b)(4)

(b) (4)

LEGEND

Cases details* where red onion was reported

Cases details* where red onion was not reported, but appeared on records and was most likely consumed

* BC ID (PHAC ID), "x2" indicates this individual reported more than one red onion exposure and appears more than once in this diagram

★ Indicates new information for OMD pulled from Fresh Point records or EHO records

Tuesday, August 11:

- No samples were collected.
- Information collected on Tuesday, August 11 provided further evidence that Thomson does not have adequate knowledge or control over their operation
 - They have 15 total employees; nearly all work is performed by contract labor crews or 3rd parties
 - They rely heavily on paperwork and documentation provided by their outside contractors
 - While reviewing documentation (newly discovered on Tuesday, August 11) the investigation team observed 6 post-dated “Well Head Inspection Checklists” and requested copies of all of these forms from 2019 to present (noting the dates of post dated documents prior the request). The copies and originals returned did not include the post dated documents.
 - While reviewing field and ranch risk assessment forms, the team consistently observed the exact same descriptions copy and pasted to describe different ranches
 - For example, Thomson’s only Bakersfield ranch with 3 well-heads is Ranch 3. However, nearly all ranches were listed as having 3 well-heads on site on Thomson risk assessment documents. These descriptions were written in paragraph form and it was exactly the same from one document to the next
- The investigation team came across a PrimusGFS audit report (they believe it was dated around April, 01, 2020). However, once they saw it, Mr. Thomson (politely) took the report from the team and said it was only for internal review. The team was interested in this report, as a lot of SOPs seemed to be dated directly before that Primus audit. As mentioned previously, the team has concerns about the SOPs being followed, so this is part of what the team is still reviewing/evaluating (see “Next Steps (internal)” section, below).

Pending Information from the team:

I posed the following back to the team, and will let you know as soon as I have the information.

- Additional request from CRT3 (see attached e-mail).
- From CRT3: “Pepper 22 is in Holtville and covers many of the earlier shipments with some later ones mixed in. If this is not accessible during this assignment, we would need to know if any product from there (Holtville) was processed in Bakersfield or if equipment was shared, etc.”
 - Once we have this intel from the investigators, we’ll need to discuss with CRT3 and SMEs whether an investigation in Holtville is needed. If it is, ORA PSN will start that process of trying to get volunteers for that assignment.
 - Per records the team reviewed, the ranches in Holtville have access to and occasionally use surface water for irrigation.

Next steps (internal):

(b) (5)

(b) (5)

Salmonella Newport/Red Onion (suspect)/Jul 2020

Case 1:21-cv-01609-JLT-CDB Document 153 Filed 06/04/24 Page 114 of 196



Pepper 22a

Classification: Farm



0 0.07 0.15 0.3 Miles
(FOUO) For Official Use Only



FDA Office of Emergency Management
Geographic Information Systems

2020-Nov-03

Page 552
For FDA Use Only | Created on 07 August 2020 by Ahmed Askar | Sources: CFSAN CORE

***Salmonella* Newport/Red onion/Jul 2020
Traceback Investigation Summary
EON 371142**

For internal FDA use only. This summary contains confidential, commercial information and may not be released outside FDA without appropriate redaction.

Traceback Abstract

A regulatory traceback was initiated for four legs at ten points-of-service (POS) in response to an outbreak of *Salmonella* Newport illnesses. As of 10/08/2020, there were 1,132 culture-confirmed illnesses in 48 states [AK (25), AL (2), AR (2), AZ (39), CA (128), CO (32), CT (2), DE (2), FL (8), GA (11), HI (3), ID (43), IL (54), IN (4), IA (31), KS (3), KY (3), ME (6), MA (2), MD (7), MI (47), MN (19), MO (11), MS (5), MT (72), NC (6), ND (9), NE (10), NH (1), NJ (12), NM (3), NV (14), NY (14), OH (11), OK (1), OR (110), PA (27), RI (3), SC (1), SD (24), TN (7), TX (2), UT (115), VA (10), WA (150), WI (11), WV (3), WY (27)]. CDC identified red onions as the vehicle of interest. Reported onset dates ranged from 06/19/2020 to 09/11/2020.

Four traceback legs representing 26 cases were initiated on 07/21/2020. Factors used in identifying “best cases” were: more than one case at a single POS with exposures to red onions. Case patients included in the traceback investigation had known meal/exposure dates which ranged from 06/19/2020 to 07/15/2020. The timeframe of interest for record collection was identified as two weeks at POS for known meal dates and three weeks for onset dates.

The four traceback legs converged on Thomson International Inc., LLC (Bakersfield, CA).

A summary of each traceback leg, including data analysis discussion, follows:

Traceback Leg 1 (Sysco Montana POS Leg)

Points-of Service:

(b) (4)

- Thomson International Inc., LLC; 11220 S. Vineland Rd., Bakersfield, CA 93307-9489

(b) (4)

(b) (4)

This restaurant is located at (b) (4). There were two lab-confirmed cases associated with this POS with meal dates of 06/19/2020 or 06/20/2020 and 06/25/2020 or 06/26/2020. The case with the earlier meal date reported eating a nacho meal. The case with the later meal date also reported eating a nacho meal and the case's friend reportedly ate a burger and shared the nachos before becoming ill with diarrhea (unconfirmed case). (b) (4)

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Montana Department of Agriculture to collect records and information from the restaurant. FDA Human and Animal Foods Division 6 East (Chicago District Office) collected records related to this restaurant from US Foods Inc (Rosemont, IL) as a part of eNSpect assignment # 170684. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b)(4), TX as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributors (b)(4), MT) and (b)(4), IL).

FROM: (b)(4)

Product Description: ONION RED JMBO BOX

| Shipment Date | Invoice # | Qty |
|----------------|-----------|-----|
| (b) (4) | | |

FROM: (b) (4)

Product Description: 1/10# PACKER ONIONS RED JMBO

| Invoice Date | Invoice # | Qty |
|----------------|-----------|-----|
| (b) (4) | | |

The bolded lots above were implicated because they would have been available at the restaurant within three weeks of the case patients' illness onset dates.

(b) (4)

This restaurant is located at (b) (4). There were two lab-confirmed cases associated with this POS with illness onset dates of 06/25/2020 and 06/26/2020. The case with the earlier onset date reported yes to eating red and white onions. The case with the later onset date reported maybe to eating onions.

FDA Human and Animal Foods Division 1 West (Minneapolis District Office) worked with the North Dakota Department of Health to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4)
(b) (4)

FROM: (b)(4)

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice Delivery Date | Invoice # | Otv |
|-----------------------|-----------|-----|
|-----------------------|-----------|-----|

(b) (4)

The bolded lots above were implicated because they would have been available at the restaurant within three weeks of the case patients' illness onset dates.

(b) (4)

This restaurant is located at (b) (4). There were two lab-confirmed cases, and a third unconfirmed case, associated with this POS with meal dates of 06/21/2020, between 06/19/2020 and 06/26/2020, and between 06/24/2020 and 07/01/2020. One confirmed case with an illness onset date of 06/27/2020 ate regularly at (b) (4), reported eating a burrito there, and said yes to eating white onions.

FDA Human and Animal Foods Division 4 West (Denver District Office) worked with the Wyoming Department of Agriculture to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4), MT).

FROM: (b)(4)

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice Delivery Date | Invoice # | Qty |
|-----------------------|-----------|---------|
| (b) (4) | (b) (4) | (b) (4) |

*Invoice number was illegible.

The bolded lots above were implicated because they would have been available at the restaurant within two weeks of the case patients' meal dates.

(b) (4)

This restaurant is located at (b) (4). There were three lab-confirmed cases associated with this POS with meal dates of 07/09/2020 and 07/10/2020. The cases reported eating a burger meal and a nacho meal, respectively.

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Montana Department of Agriculture to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4), MT).

FROM: (b)(4)

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice Delivery Date | Invoice # | Qty |
|-----------------------|-----------|---------|
| (b) (4) | (b) (4) | (b) (4) |

The bolded lots above were implicated because they would have been available at the restaurant within two weeks of the case patients' meal dates.

(b)(4)

FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this distributor from Sysco (b) (4) [REDACTED], as a part of eNSpect assignment # 167287.

Sysco Montana Inc received red onions from Thomson International Inc. (Bakersfield, CA) via distributor Onions 52 Inc (Syracuse, UT), (b) (4) [REDACTED]

FROM: Onions 52 Inc

TO: (b) (4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b) (4)

FROM: Onions 52 Inc

TO: (b) (4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b) (4)

FROM: Onions 52 Inc

TO: (b) (4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b) (4)

FROM: Onions 52 Inc

TO: (b) (4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b) (4)

The bolded lots above were implicated because they would have been available to supply the implicated shipments to the POS. A single shipment with red onions from (b) (4) (b) (4) has a ship date (b) (4) the first implicated shipment at (b) (4) and was not implicated. A single shipment with Subway branded red onions in a 35-lb container from (b) (4) was not implicated due to branding and container size.

(b) (4)

(b) (4)

FDA Human and Animal Foods Division 6 East (Chicago District Office) collected records related to this distributor from (b) (4) as a part of eNSpect assignment # 170684.

(b) (4) received red onions from (b) (4)

FROM: (b) (4)

TO: (b) (4)

Product Description: 10#BG RED ONIONS T-JFP-C JUMBO US#1 Product of USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b) (4)

FROM: (b) (4)

TO: (b) (4)

Product Description: US #1 Jumbo Red Onions 10# Mesh

| BOL Ship Date | PO # | Delivery PO # | Qty |
|---------------|------|---------------|-----|
|---------------|------|---------------|-----|

(b) (4)

The bolded lots above were implicated because they would have been available to supply the implicated shipments to the POS.

Onions 52 Inc (Syracuse, UT) [FEI: 3016800010]

Onions 52 Inc is located at 800 S. 2000 W., Syracuse, UT 84075-6924.

FDA Human and Animal Foods Division 4 West (Denver District Office) collected information and records related to this distributor as a part of eNSpect assignment # 167509.

Onions 52 Inc has a sales arrangement with Thomson International Inc., LLC (Bakersfield, CA).

Thomson International Inc., LLC (Bakersfield, CA) [FEI: 3004391505]

Thomson International Inc., LLC is located at 11220 S. Vineland Rd., Bakersfield, CA 93307-9489.

FDA Human and Animal Foods Division 5 West (San Francisco District Office) and the California Department of Food and Agriculture performed an investigation with record collection and environmental sampling as a part of FACTS assignment # 12055268. FDA Office of Regulatory Affairs Produce Safety Network, FDA Human and Animal Foods Division 5 West (San Francisco District Office), the California Department of Public Health, and the California Department of Food and Agriculture performed an investigation with record collection and environmental, product, and water sampling as a part of FACTS assignment # 12055297.

Thomson International Inc., LLC provided data in a spreadsheet that identified the growers, fields, harvester, harvest dates, pack dates, and lots for the red onions identified by the order numbers and customer purchase order numbers from implicated shipments sent to Sysco Montana Inc. Additional documentation provided by Thomson International Inc., LLC included corrected invoices and pallet tags associated with each order, however the associated lot numbers were not consistent and not routinely managed by the firm. Thomson International Inc., LLC identified the spreadsheet as the most accurate source of traceability information.

FOR: Choppers

Product Type: JR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|-------------|-----------|---------------|-------------------------|-----------|-----|
| 0172701 | 1915141 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | *** | 523 |

**Pack date was not available.

FOR: Doc Holliday's Roadhouse

Product Type: JR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|-------------|-----------|---------------|-------------------------|------------------------|-----|
| 0164626 | 1914859 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 05/28/2020 | 523 |
| 0169326 | 1914965 | Thomson | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/16/2020 | *** | 523 |
| 0175601 | 1915267 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 06/06/2020, 06/08/2020 | 523 |
| 0179308 | 1915445 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020 | 533 |
| 0180808 | 1915529 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020 | 533 |

**Pack date was not available.

FOR: Las Margaritas

Product Type: JR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|-------------|-----------|---------------|-------------------------|------------------------|-----|
| 0164626 | 1914859 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 05/28/2020 | 523 |
| 0169326 | 1914965 | Thomson | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/16/2020 | *** | 523 |
| 0172701 | 1915141 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | *** | 523 |
| 0175601 | 1915267 | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 06/06/2020, 06/08/2020 | 523 |
| 0179308 | 1915445 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020 | 533 |
| 0180808 | 1915529 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020 | 533 |
| 0184915 | 1915683 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/19/2020 | 533 |
| 0186715 | 1915807 | Thomson | 32-1 | JJ Harvesting | 06/30/2020 – 07/02/2020 | 07/06/2020 | 553 |
| 0189722 | 1915996 | Thomson | GLAD E | JJ Harvesting | 06/22/2020 – 06/26/2020 | 06/26/2020 | 543 |

**Pack date was not available.

FOR: MT Pints

Product Type: JR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|---------------|-----------------|---------------|--|------------------------|----------|
| 0180808 | 1915529 | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020 | 533 |
| 0192922 | 1916091 | Fast, Thomson | R&G 161, GLAD E | JJ Harvesting | 06/02/2020 – 06/09/2020, 06/22/2020 – 06/26/2020 | 06/19/2020, 06/26/2020 | 533, 543 |

Four fields were identified for the implicated red onions in this leg.

- Pepper 22 (Holtville, CA)
 - 32°53'22.2" N – 115°22'8" W
 - 32°53'22.2" N – 115°22'9" W
 - 32°53'22.2" N – 115°22'10" W
- R&G Field 161 (Bakersfield, CA)
 - 35°24'22" N – 119°11'25" W
- Thomson 32-1 (Bakersfield, CA)
 - 35°24'18" N – 118°89'47" W
 - Of note, the 07/06/2020 pack date associated with lot 553 grown in this field is after the 06/22/202 ship date for Order # 0186715 and after the meal dates associated with the POS Las Margaritas.
- Thomson Gladestone (GLAD E) (Bakersfield, CA)
 - 35°16'01" N – 118°56'57" W

(b) (4)

(b) (4) is located at (b) (4). Follow up was not conducted at this firm because it was not identified as a point of convergence.

(b) (4)

(b) (4) is located at (b) (4). Follow up was not conducted at this firm because it was not identified as a point of convergence.

Traceback Leg 2 (Sysco Portland POS Leg)

Points-of Service:

(b) (4)

Endpoint:

- Thomson International Inc-LLC: 11220 S. Vineland Rd., Bakersfield, CA 93307-9489

(b) (4)

(b) (4)

This restaurant is located at (b) (4). There were two lab-confirmed cases associated with this POS with illness onset dates of 06/30/2020 and 07/01/2020. The case with the earlier onset date reported eating chicken at (b) (4).

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Oregon Health Authority to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4), OR).

FROM: (b)(4).

Product Description: 25 LB IMPFRSH ONION RED MED FRSH CTN

| Invoice Delivery Date | Invoice # | Qty |
|-----------------------|-----------|-----|
|-----------------------|-----------|-----|

(b) (4)

The bolded lot above was implicated because it would have been available at the restaurant within three weeks of the case patients' illness onset dates.

(b) (4)

This restaurant is located at (b) (4). There were five lab-confirmed cases associated with this POS with meal dates of 06/30/2020 and 07/02/2020.

Sixty-nine additional probable cases were identified. One case patient with an illness onset date of 07/03/2020 reported eating carne asada and chips with salsa.

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Oregon Health Authority to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4), OR).

FROM: (b)(4).

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice Delivery Date | Invoice # | Oty |
|-----------------------|-----------|-----|
| (b) (4) | (4) | |

(b) (4)

The bolded lots above were implicated because they would have been available at the restaurant within two weeks of the case patients' meal dates.

(b) (4)

This long-term care facility is located at (b) (4). There were three lab-confirmed cases associated with this POS with illness onset dates of 07/08/2020 and 07/09/2020. The three cases are all residents at this long-term care facility and ate all of their meals here; a specific meal date of 07/02/2020 was provided.

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Oregon Health Authority to collect records and information from the long-term care facility. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this long-term care facility from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributors (b)(4) and (b) (4).

FROM: (b)(4)

Product Description: 5 LB IMPFRSH ONION RED JMBO CTN

| Invoice | Delivery Date | Invoice # | Qty |
|---------|---------------|-----------|-----|
| (b) (4) | | | |

The bolded lots above were implicated because they would have been available at the restaurant within three weeks of the case patients' illness onset dates. A single shipment of red onions was received from (b) (4), but it was not implicated because it was received after the likely meal dates.

(b) (4)

This restaurant is located at (b) (4). There were two lab-confirmed cases associated with this POS with meal dates of 07/09/2020. The cases were at a catered event on 07/09/2020.

FDA Human and Animal Foods Division 6 West (Seattle District Office) worked with the Oregon Health Authority to collect records and information from the restaurant. FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this restaurant from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4), OR).

FROM: (b)(4)

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice | Delivery Date | Invoice # | Qty |
|---------|---------------|-----------|-----|
| (b) (4) | | | |

The bolded lots above were implicated because they would have been available at the restaurant within three weeks of the case patients' illness onset dates.

(b)(4), OR) [FEI: (b)(4)

(b)(4) is located at (b) (4).

FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this distributor from Sysco (b) (4) [redacted], as a part of eNSpect assignment # 167287.

Sysco Portland, Inc. received red onions from Thomson International Inc. (Bakersfield, CA) via distributor Onions 52 Inc (Syracuse, UT). (b) (4) [redacted] including with shipper (b) (4) or shipper (b) (4) [redacted]

FROM: Onions 52 Inc

TO: (b)(4)

Product Description: US#1 Carton 25 lb Medium Red Conv Globe Type Onions Produce of USA

(b)(4)

FROM: Onions 52 Inc

TO: (b)(4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

(b)(4)

FROM: Onions 52 Inc

TO: (b)(4)

Product Description: US#1 Carton 5 lb Jumbo Red Conv Globe Type Onions Produce of USA

(b)(4)

FROM: Onions 52 Inc

TO: (b)(4)

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

(b)(4)

FROM: (b)(4)

TO: (b)(4)

Product Description: BAG RED ONIONS 25 LBS JUMBO USA

| BOL Ship Date | Order # | Cust PO # | Qty |
|---------------|---------|-----------|-----|
|---------------|---------|-----------|-----|

(b)(4)

The bolded lots above were implicated because Sysco (b)(4) provided traceability information connecting incoming shipments from Onions 52 Inc and (b)(4) to their outgoing shipments to supply the POS.

Onions 52 Inc (Syracuse, UT) [FEI: 3016800010]

Onions 52 Inc is located at 800 S. 2000 W., Syracuse, UT 84075-6924.

FDA Human and Animal Foods Division 4 West (Denver District Office) collected information and records related to this distributor as a part of eNSpect assignment # 167509.

Onions 52 Inc has a sales arrangement with Thomson International Inc., LLC (Bakersfield, CA).

(b)(4)

(b)(4) is located at (b)(4) Follow up was not conducted at this firm because it was not identified as a point of convergence.

Thomson International Inc., LLC (Bakersfield, CA) [FEI: 3004391505]

Thomson International Inc., LLC is located at 11220 S. Vineland Rd., Bakersfield, CA 93307-9489.

FDA Human and Animal Foods Division 5 West (San Francisco District Office) and the California Department of Food and Agriculture performed an investigation with record collection and environmental sampling as a part of FACTS assignment # 12055268. FDA Office of Regulatory Affairs Produce Safety Network, FDA Human and Animal Foods Division 5 West (San Francisco District Office), the California Department of Public Health, and the California

Department of Food and Agriculture performed a root cause investigation with record collection and environmental, product, and water sampling as a part of FACTS assignment # 12055297.

Thomson International Inc., LLC provided data in a spreadsheet that identified the growers, fields, harvester, harvest dates, pack dates, and lots for the red onions identified by the order numbers and customer purchase order numbers from implicated shipments sent to Sysco Portland, Inc. Additional documentation provided by Thomson International Inc., LLC included corrected invoices and pallet tags associated with each order, however the associated lot numbers were not consistent and not routinely managed by the firm. Thomson International Inc., LLC identified the spreadsheet as the most accurate source of traceability information.

FOR: Shari's

Product Type: MR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|-------------|-----------|---------------|-------------------------|------------|-----|
| 0170701 | 1915078A | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 06/06/2020 | 523 |

FOR: Si Casa Flores

Product Type: JR5CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|-------------|-----------|---------------|-------------------------|------------|-----|
| 0170701 | 1915078A | RothFleisch | Pepper 22 | JJ Harvesting | 05/10/2020 – 05/15/2020 | 06/06/2020 | 523 |
| 0184415 | 1915621A | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/19/2020 | 531 |

FOR: Avamere at Three Fountains

Product Type: JR5CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|--------|---------|---------------|-------------------------|------------|-----|
| 0184415 | 1915621A | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/19/2020 | 531 |

FOR: Baja Fresh

Product Type: JR25CTN

| Order # | Cust PO # | Grower | Field | Harvester | Harvest Dates | Pack Date | Lot |
|---------|-----------|--------|---------|---------------|-------------------------|------------------------|-----|
| 0184415 | 1915621A | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/16/2020, 06/22/2020 | 533 |
| 0189022 | 1915874A | Fast | R&G 161 | JJ Harvesting | 06/02/2020 – 06/09/2020 | 06/19/2020 | 533 |

Two fields were identified for the implicated red onions in this leg.

- Pepper 22 (Holtville, CA)
 - 32°53'22.2" N – 115°22'9" W
- R&G Field 161 (Bakersfield, CA)
 - 35°24'22" N – 119°11'25" W

Traceback Leg 3 (Sysco (b)(4) POS Leg)

Point-of Service:

(b) (4)

Endpoint:

- Thomson International Inc. ~~LLC~~; 11220 S. Vineland Rd., Bakersfield, CA 93307-9489

(b) (4)

This (b) (4) is located at (b) (4). There were two lab-confirmed cases associated with this POS with the same illness onset date of 07/06/2020. Exposure information was not available for either case.

FDA Human and Animal Foods Division 4 West (Denver District Office) worked with the Arizona Department of Health Services to collect records from (b) (4). FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this facility from Sysco (b) (4) as a part of eNSpect assignment # 167287.

(b) (4) received red onions from their distributor (b)(4). (b) (4)

FROM: (b)(4).

Product Description: 25 LB IMPFRSH ONION RED JMBO FRSH BOX

| Invoice Delivery Date | Invoice # | Qty |
|-----------------------|-----------|-----|
| (b) (4) | | |

(b) (4)

The bolded lots above were implicated because they would have been available at (b) (4) within three weeks of the case patients' illness onset date.

Sysco (b)(4), AZ, (b) (4)

Sysco Arizona, Inc. is located at 611 South 80th Ave., Tolleson, AZ 85353-4025.

FDA Human and Animal Foods Division 3 West (Dallas District Office) collected records related to this distributor from Sysco (b) (4) as a part of eNSpect assignment # 167287.

Sysco Arizona, Inc. received red onions from Thomson International Inc. (Bakersfield, CA) via distributor Onions 52 Inc (Syracuse, UT), (b) (4) via Onions 52 Inc (Calipatria, CA), and Thomson International Inc. (Bakersfield, CA) via both Onions 52 Inc (Syracuse, UT) and (b) (4)

FROM: Onions 52 Inc

Product Description: US#1 Carton 25 lb Jumbo Red Conv Globe Type Onions Produce of USA

(b)(4)

The bolded lots above were implicated because they would have been available to supply the implicated shipments to the POS. A single shipment with red onions from (b)(4), NC) via Onions 52 Inc (Calipatria, CA) had a delivery date (b)(4) before the first implicated shipment at (b)(4) and was not implicated. A single shipment from Thomson International Inc. (Bakersfield, CA) via both Onions 52 Inc (Syracuse, UT) and (b)(4) was delivered after the case onset date and was not implicated.

Onions 52 Inc (Syracuse, UT) [FEI: 3016800010]

Onions 52 Inc is located at 800 S. 2000 W., Syracuse, UT 84075-6924.

FDA Human and Animal Foods Division 4 West (Denver District Office) collected information and records related to this distributor as a part of eNSpect assignment # 167509.

| Onions 52 Inc has a sales arrangement with Thomson International Inc., LLC (Bakersfield, CA).

| Thomson International Inc., LLC (Bakersfield, CA) [FEI: 3004391505]

| Thomson International Inc., LLC is located at 11220 S. Vineland Rd., Bakersfield, CA 93307-9489.

FDA Human and Animal Foods Division 5 West (San Francisco District Office) and the California Department of Food and Agriculture performed an investigation with record collection and environmental sampling as a part of FACTS assignment # 12055268. FDA Office of Regulatory Affairs Produce Safety Network, FDA Human and Animal Foods Division 5 West (San Francisco District Office), the California Department of Public Health, and the California Department of Food and Agriculture performed a root cause investigation with record collection and environmental, product, and water sampling as a part of FACTS assignment # 12055297.

| Field-level information was not requested for this leg because the traceback information was not available until after the data collection at Thomson International Inc., LLC occurred.

Traceback Leg 4 (b) (4)

Point-of Service:

- (b) (4)

Endpoints:

- (b) (4)
- Thomson International Inc., LLC; 11220 S. Vineland Rd., Bakersfield, CA 93307-9489

(b) (4)

This restaurant is located at (b) (4). There were three lab-confirmed cases associated with this POS with meal dates of 07/09/2020, 07/14/2020, and 07/15/2020. The cases reported eating grilled chicken with red onions, a hot and spicy buffalo chicken salad with red onions, and a cheeseburger with red onions, respectively.

FDA Human and Animal Foods Division 2 East (Baltimore District Office) worked with the Maryland Department of Health and the Cecil County Health Department to collect records and information from the restaurant.

(b) (4) received red onions from their distributor (b) (4). The restaurant indicated that it utilizes a first-in/first-out practice for its onions.

FROM: (b) (4)

Product Description: Onions Red Jumbo

| Invoice Date | Invoice # | Qty |
|--------------|-----------|-----|
|--------------|-----------|-----|

(b) (4)

The bolded lots above were implicated because they would have been available at the restaurant within two weeks of the case patients' meal dates.

(b) (4)

(b) (4) is located at (b) (4).

FDA Human and Animal Foods Division 2 East (New Jersey District Office) collected records from this distributor.

(b) (4) received red onions from (b) (4) and (b) (4). The firm indicated that it works with a broker and receives its onions from various suppliers at the (b) (4). The firm purchases the red onions from these suppliers and delivers them to its customers the same day.

FROM: (b) (4)

Product Description: Red Onions

| Spreadsheet Purchase Date | Brand |
|---------------------------|-------|
|---------------------------|-------|

(b) (4)

FROM: (b) (4)

Product Description: Onion Red Jumbo-25 LB.U.S.A.

| Invoice Date | Ticket # | Brand | Otv |
|--------------|----------|-------|-----|
|--------------|----------|-------|-----|

(b) (4)

***brand not listed

The bolded lots above were implicated because (b) (4) purchased from these suppliers and delivered them to the point-of-service on the same day as implicated shipments.

(b) (4)

(b) (4) is located at (b) (4). Follow up was not conducted at this firm because it was not identified as a point of convergence.

(b) (4)

(b) (4) is located at (b) (4)

FDA Human and Animal Foods Division 2 East (Baltimore District Office) collected records from (b) (4)

(b) (4) received jumbo red onions via (b) (4) (b) (4) does not come into possession of the onions) and indicated which of these shipments were used to fill shipments to (b) (4) brand red onions were from (b) (4)

VIA: (b) (4)

Product Description: 25 LB. US#1 JUMBO RED ONIONS

| BOL Delivery Date | Invoice # | Brand | Qty |
|-------------------|-----------|-------|-----|
| (b) (4) | | | |

The bolded lots above were implicated because (b) (4) indicated that they were used to fill the implicated shipments sent to (b) (4) brand filled the (b) (4) invoice shipment and the (b) (4) and (b) (4) invoice shipments to (b)(4). TLC brand onions are packaged by Thomson International Inc., LLC (Bakersfield, CA).

FROM: (b) (4)

Product Description: Onions 25# Jumbo Red US #1 Onions

| Invoice Date | Invoice # | Qty |
|--------------|-----------|-----|
| (b) (4) | | |

(b) (4)

(b) (4) is located at (b) (4).

(b) (4) and did not have possession of the onions. The (b) (4) red onions were sourced (b) (4)

Minkus Family Farm Inc (New Hampton, NY) (b) (4)

Minkus Family Farm Inc is located at 101 Celery Ave., New Hampton, NY 10958-2203.

Minkus Family Farm Inc is a customer of Onions 52 Inc (Syracuse, UT) and received onions that were a part of Thomson International Inc., LLC's recall related to this investigation.

Onions 52 Inc (Syracuse, UT) [FEI: 3016800010]

Onions 52 Inc is located at 800 S. 2000 W., Syracuse, UT 84075-6924.

Onions 52 Inc has a sales arrangement with Thomson International Inc., LLC (Bakersfield, CA).

Thomson International Inc., LLC (Bakersfield, CA) [FEI: 3004391505]

Thomson International Inc., LLC is located at 11220 S. Vineland Rd., Bakersfield, CA 93307-9489.

FDA Human and Animal Foods Division 5 West (San Francisco District Office) and the California Department of Food and Agriculture performed an investigation with record collection and environmental sampling as a part of FACTS assignment # 12055268. FDA Office of Regulatory Affairs Produce Safety Network, FDA Human and Animal Foods Division 5 West

(San Francisco District Office), the California Department of Public Health, and the California Department of Food and Agriculture performed a root cause investigation with record collection and environmental, product, and water sampling as a part of FACTS assignment # 12055297.

Lot information was not identified for the implicated onions from this leg of traceback. The implicated shipment in this leg was identified after relevant records were requested from Onions 52 Inc and Thomson International Inc, LLC.

Additional Traceback and Traceforward Information

The above four legs of traceback were performed on the confirmed vehicle of red onions. Exposures to other colors of onions were identified by CDC and state partners. The California Department of Public Health and the Michigan Department of Agriculture & Rural Development performed traceback of yellow onions for seven points-of-service.

The California Department of Public Health traced onions (red and yellow) from (b) (4) had seven confirmed cases, (b) (4) had three confirmed cases, (b) (4) had three confirmed cases, and (b) (4) had three confirmed cases. (b) (4) received yellow onions that were sourced (b) (4) and Thomson brand yellow onions from Onions 52. (b) (4) received yellow onions that were sourced (b) (4) (b) (4) and Onions 52. (b) (4) received yellow onions that were sourced (b) (4), Onions 52, and (b) (4) received yellow onions that were sourced (b) (4) (b) (4) and red onions that were sourced (b) (4). The traceback for these legs was limited by recordkeeping, especially at the level of the suppliers to the points-of-service.

The Michigan Department of Agriculture & Rural Development traced yellow onions from (b) (4) had three confirmed cases, (b) (4) had two confirmed cases, and (b) (4) had six confirmed cases. (b) (4) received yellow onions that were sourced (b) (4), and Thomson International (Bakersfield, CA) via Onions 52. (b) (4) received yellow onions that were sourced back to Thomson International (Bakersfield, CA) via Onions 52. (b) (4) received yellow onions that were sourced back to (b) (4), IL) and Anthony Marano Company (Chicago, IL; a customer of Onions 52).

Through the recall audit check procedures, traceforward information was obtained describing customer lists that received recalled onions. A traceforward product flow diagram was produced showing Thomson International Inc, LLC's direct customers, as well as the supply chains for the four legs of red onion traceback, and the yellow onion tracebacks performed by the California Department of Public Health and the Michigan Department of Agriculture & Rural

Development. The points-of-service identified in the traceforward product flow diagram indicate if red and/or yellow onions sourced from Thomson International Inc., LLC were known to have been supplied at some time; this does not indicate if the onions were the onions that were consumed by the cases, just known distribution. Additional grocery companies identified in the recall audit check and downstream recalls included: ALDI, Food Lion, Giant Food, Hello Fresh, Imperfect Foods, Kroger, Publix Super Markets, Stop & Shop, Walmart, and WinCo.

Conclusion

The traceback investigation identified four legs of distribution for red onions served at ten points-of-service. Thomson International Inc (Bakersfield, CA) was identified as the source of the red onions based on convergence of the legs of traceback. Additional information from traceback investigations performed by the Canadian Food Inspection Agency, the California Department of Public Health and the Michigan Department of Agriculture & Rural Development support this conclusion

Limitations

This traceback investigation was limited by the exposure information provided by cases in identified clusters, the size of illness clusters identified, limited supply chain diversity identified, and lack of adequate recordkeeping. Epidemiologic information regarding case exposures was limited when cases were unable to recall the type of onions consumed. The majority of the clusters, nine of ten, were less than four cases per point-of-service. Three of the four legs of red onion traceback were through various Sysco distribution centers and did represent a broader diversity of supply chains.

Records were not available or were incomplete at some points along the distribution chains: one point-of-service did not identify Sysco as a supplier, but later records from Sysco identified it as such; records at Thomson International Inc., LLC for field level information were known to be incorrect and information used in this traceback was the best information that the firm could identify.

Attachments

Traceback Timeline

Master & Detailed Traceback and Traceforward Diagrams

Appendix B: Red onion exposures and details based on exposures reported by confirmed cases, purchase records and restaurant/retirement residence menus and invoices (includes cases who answered red onion question, were part of a cluster, or reported a meal at a restaurant supplied by Sysco)

| Case ID | Onset | Collection | Reported Red Onion Exposure | Cluster Case | Cluster Name | Cluster Role | Date of Cluster Meal | Cluster Supplied by Sysco | Restaurant Name (non-cluster) | Restaurant Meal Contained Red Onions | Restaurant Supplied Red Onions by Sysco | |
|--|------------|------------|-----------------------------|--------------|--------------|--------------|----------------------|---------------------------|-------------------------------|--------------------------------------|---|--|
| Retirement Residence Clusters **Note BC-29 is a resident of (b) (4) and also reported restaurant exposures | | | | | | | | | | | | |
| BC-29 | | 2020-07-13 | Y | Yes | (b) (4) | Resident | | (b) (4) | (b)(4) | | (b)(4) | |
| BC-29 | | 2020-07-13 | Y | Yes | | Resident | | | | | | |
| AB-32 | 2020-07-02 | 2020-07-08 | | Yes | | Resident | | | | | | |
| AB-33 | 2020-06-15 | 2020-07-11 | | Yes | | Resident | | | | | | |
| AB-31 | 2020-07-01 | 2020-07-01 | | Yes | | Resident | | | | | | |
| BC-07 | 2020-07-13 | 2020-07-13 | | Yes | | Resident | | | | | | |
| BC-25 | 2020-07-09 | 2020-07-14 | | Yes | | Resident | | | | | | |
| AB-47 | 2020-07-07 | 2020-07-07 | | Yes | | Resident | | | | | | |
| AB-56 | 2020-07-05 | 2020-07-10 | | Yes | | Resident | | | | | | |
| AB-45 | 2020-07-08 | 2020-07-08 | | Yes | | Resident | | | | | | |
| AB-26 | 2020-06-27 | 2020-06-29 | | Yes | | Resident | | | | | | |
| AB-27 | 2020-06-25 | 2020-06-30 | | Yes | | Resident | | | | | | |
| AB-28 | 2020-06-24 | 2020-06-29 | | Yes | | Resident | | | | | | |
| AB-29 | 2020-07-04 | 2020-07-06 | | Yes | | Resident | | | | | | |
| AB-30 | 2020-06-22 | 2020-06-29 | | Yes | | Resident | | | | | | |
| BC-06 | 2020-07-09 | 2020-07-11 | | Yes | | Resident | | | | | | |
| AB-42 | 2020-07-02 | 2020-07-06 | | Yes | | Resident | | | | | | |
| AB-43 | 2020-07-04 | 2020-07-07 | | Yes | | Resident | | | | | | |
| AB-34 | 2020-06-30 | 2020-07-03 | | Yes | | Staff | | | | | | |
| Restaurant Clusters | | | | | | | | | | | | |
| AB-64 | 2020-07-07 | 2020-07-10 | Y | Yes | | Patron | 2020-07-04 | | | | | |
| AB-65 | 2020-07-09 | 2020-07-10 | | Yes | | Patron | 2020-07-04 | | | | | |
| AB-63 | 2020-07-07 | 2020-07-08 | P | Yes | | Staff | 2020-07-02 | | | | | |
| ON-02 | 2020-07-11 | | Y | Yes | | Patron | 2020-07-08 | | | | | |
| BC-18 | 2020-07-04 | 2020-07-06 | | Yes | | Patron | 2020-06-28 | | | | | |

| Case ID | Onset | Collection | Reported Red Onion Exposure | Cluster Case | Cluster Name | Cluster Role | Date of Cluster Meal | Cluster Supplied by Sysco | Restaurant Name (non-cluster) | Restaurant Meal Contained Red Onions | Restaurant Supplied Red Onions by Sysco |
|---|------------|------------|-----------------------------|--------------|--------------|--------------|----------------------|---------------------------|-------------------------------|--------------------------------------|---|
| BC-21 | 2020-07-01 | 2020-07-04 | Y | Yes | (b) (4) | Patron | 2020-06-28 | (b) (4) | (b) (4) | | (b) (4) |
| AB-113 | 2020-06-30 | 2020-06-30 | Y | Yes | | Patron | 2020-06-27 | | | | |
| AB-15 | 2020-06-29 | 2020-07-02 | DK | Yes | | Patron | 2020-06-27 | | | | |
| AB-16 | 2020-07-02 | 2020-07-06 | Y | Yes | | Patron | 2020-06-30 | | | | |
| AB-84 | 2020-06-30 | 2020-07-02 | Y | Yes | | Patron | 2020-06-26 | | | | |
| AB-61 | 2020-06-28 | 2020-07-07 | | Yes | | Patron | 2020-06-27 | | | | |
| AB-62 | 2020-07-04 | 2020-07-08 | Y | Yes | | Staff | | | | | |
| AB-75 | 2020-07-01 | 2020-07-04 | Y | Yes | | Patron | 2020-06-30 | | | | |
| AB-104 | 2020-07-03 | 2020-07-06 | Y | Yes | | Staff | 2020-07-01 | | | | |
| AB-76 | 2020-06-30 | 2020-07-04 | Y | Yes | | Patron | 2020-06-24 | | | | |
| BC-12 | 2020-07-02 | 2020-07-10 | Y | Yes | | Patron | | | | | |
| BC-15 | 2020-07-01 | 2020-07-08 | Y | Yes | | Patron | | | | | |
| BC-13 | 2020-07-02 | 2020-07-10 | Y | Yes | | Patron | 2020-06-28 | | | | |
| BC-26 | 2020-07-07 | 2020-07-13 | | Yes | | Patron | 2020-06-28 | | | | |
| AB-70 | 2020-07-06 | 2020-07-09 | | Yes | | Patron | 2020-07-03 | | | | |
| AB-70 | 2020-07-06 | 2020-07-09 | | Yes | | Patron | 2020-07-03 | | | | |
| AB-107 | 2020-07-03 | 2020-07-06 | P | Yes | | Patron | 2020-06-29 | | | | |
| AB-116 | 2020-07-02 | 2020-07-05 | Y | Yes | | Patron | 2020-06-30 | | | | |
| Non-Cluster Cases with Red Onion Exposure Information | | | | | | | | | | | |
| SK-04 | 2020-07-10 | | Y | | | | | | Y | | |
| BC-17 | 2020-06-30 | 2020-07-08 | | | | | | | | | |
| BC-24 | 2020-06-28 | 2020-07-04 | Y | | | | | | Y | | |
| BC-41 | 2020-07-07 | | P | | | | | | | | |
| MB-06 | 2020-07-05 | | DK | | | | | | | | |
| MB-09 | 2020-07-10 | | Y | | | | | | Y | | |
| ON-01 | 2020-07-06 | 2020-07-06 | Y | | | | | | Y | | |

| Case ID | Onset | Collection | Reported Red Onion Exposure | Cluster Case | Cluster Name | Cluster Role | Date of Cluster Meal | Cluster Supplied by Sysco | Restaurant Name (non-cluster) | Restaurant Meal Contained Red Onions | Restaurant Supplied Red Onions by Sysco |
|---------|------------|------------|-----------------------------|--------------|--------------|--------------|----------------------|---------------------------|-------------------------------|--------------------------------------|---|
| MB-09 | 2020-07-10 | | Y | | | | | | (b) (4) | Y | (b) (4) |
| AB-86 | 2020-06-27 | 2020-07-30 | Y | | | | | | | Y | |
| AB-117 | 2020-07-06 | 2020-07-06 | | | | | | | | | |
| AB-82 | 2020-06-29 | 2020-07-01 | Y | | | | | | | Y | |
| AB-114 | 2020-07-07 | 2020-07-07 | Y | | | | | | | Y | |
| MB-06 | 2020-07-05 | | DK | | | | | | | | |
| BC-14 | 2020-07-06 | 2020-07-09 | Y | | | | | | | Y | |
| BC-51 | | 2020-07-17 | | | | | | | | | |
| BC-49 | 2020-07-10 | 2020-07-15 | Y | | | | | | | Y | |
| AB-109 | 2020-07-08 | 2020-07-09 | Y | | | | | | | Y | |
| BC-40 | 2020-07-18 | | | | | | | | | | |
| MB-03 | 2020-07-05 | | Y | | | | | | | Y | |
| BC-49 | 2020-07-10 | 2020-07-15 | Y | | | | | | | Y | |
| BC-09 | 2020-07-05 | 2020-07-09 | Y | | | | | | | Y | |
| AB-90 | 2020-06-26 | 2020-06-29 | P | | | | | | | | |
| BC-23 | 2020-06-30 | 2020-07-07 | | | | | | | | | |
| MB-05 | 2020-07-10 | | | | | | | | | | |
| BC-14 | 2020-07-06 | 2020-07-09 | Y | | | | | | | Y | |
| MB-07 | 2020-07-05 | | Y | | | | | | | Y | |
| AB-87 | 2020-06-22 | 2020-06-30 | Y | | | | | | | Y | |
| BC-41 | 2020-07-07 | | P | | | | | | | | |
| AB-89 | 2020-06-26 | 2020-07-05 | | | | | | | | | |
| MB-01 | 2020-07-03 | | Y | | | | | | | Y | |
| BC-03 | 2020-07-05 | 2020-07-08 | | | | | | | | | |
| AB-80 | 2020-07-02 | 2020-07-03 | | | | | | | | | |

| Case ID | Onset | Collection | Reported Red Onion Exposure | Cluster Case | Cluster Name | Cluster Role | Date of Cluster Meal | Cluster Supplied by Sysco | Restaurant Name (non-cluster) | Restaurant Meal Contained Red Onions | Restaurant Supplied Red Onions by Sysco |
|---------|------------|------------|-----------------------------|--------------|--------------|--------------|----------------------|---------------------------|-------------------------------|--------------------------------------|---|
| AB-90 | 2020-06-26 | 2020-06-29 | P | | | | | | (b) (4) | | (b) (4) |
| AB-03 | 2020-07-08 | | | | | | | | | | |
| BC-04 | 2020-07-09 | 2020-07-12 | DK | | | | | | | | |
| AB-01 | 2020-06-24 | 2020-06-25 | P | | | | | | | | |
| AB-81 | 2020-07-01 | 2020-07-02 | P | | | | | | | | |
| BC-05 | 2020-07-03 | 2020-07-09 | P | | | | | | | | |
| AB-106 | 2020-07-02 | 2020-07-07 | Y | | | | | | | | |
| AB-79 | 2020-07-01 | 2020-07-03 | Y | | | | | | | | |
| AB-85 | 2020-07-01 | 2020-07-03 | Y | | | | | | | | |
| BC-19 | 2020-06-30 | 2020-07-03 | Y | | | | | | | | |
| MB-14 | 2020-07-14 | | Y | | | | | | | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|---|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------|-------------|---------|--------------|
| Confirmed cases with most likely onion exposure at a residential facility | | | | | | | | | | | | |
| AB-58 | Red | M | (b) (4) | | | | Y | (b) (4) | | | Y | Resident |
| BC-29 | Red | Y | | | | | Y | | | | Y | Resident |
| BC-86 | Red | M | | | | | Y | | | | Y | Resident |
| AB-20 | Red | M | | | | | Y | | | | Y | Resident |
| AB-32 | Red | M | | | | | Y | | | | Y | Resident |
| AB-33 | Red | M | | | | | Y | | | | Y | Resident |
| AB-34 | Red | M | | | | | Y | | | | Y | Staff |
| AB-35 | Red | M | | | | | Y | | | | Y | Resident |
| AB-21 | Red | M | | | | | Y | | | | Y | Resident |
| AB-37 | Red | M | | | | | Y | | | | Y | Resident |
| PE-01 | Other | P | | | | | Y | | | Cooked | | Staff |
| AB-181 | Other | DK | | | | | Y | | | | | Resident |
| AB-36 | Red | M | | | | | Y | | | | Y | Resident |
| AB-31 | Red | M | | | | | Y | | | | Y | Resident |
| BC-07 | Red | M | | | | | Y | | | | Y | Resident |
| BC-25 | Red | M | | | | | Y | | | | Y | Resident |
| BC-87 | Other | DK | | | | | Y | | | Raw | | Staff |
| AB-12 | Red | M | | | | | Y | | | | Y | Resident |
| AB-13 | Red | M | | | | | Y | | | | Y | Resident |
| AB-47 | Red | M | | | | | Y | | | | Y | Resident |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------|-------------|---------|--------------|
| AB-48 | Red | M | (b) (4) | | | | Y | (b) (4) | | | Y | Resident |
| AB-49 | Red | M | | | | | Y | | | | Y | Resident |
| AB-50 | Red | M | | | | | Y | | | | Y | Resident |
| AB-51 | Red | M | | | | | Y | | | | Y | Resident |
| AB-52 | Red | M | | | | | Y | | | | Y | Resident |
| AB-53 | Red | M | | | | | Y | | | | Y | Resident |
| AB-54 | Red | M | | | | | Y | | | | Y | Resident |
| AB-55 | Red | M | | | | | Y | | | | Y | Resident |
| AB-56 | Red | M | | | | | Y | | | | Y | Resident |
| AB-57 | Red | M | | | | | Y | | | | Y | Resident |
| AB-121 | Red | M | | | | | Y | | | | Y | Staff |
| AB-41 | Red | DK | | | | | Y | | | | Y | Staff |
| AB-39 | Red | M | | | | | Y | | | | Y | Staff |
| AB-128 | Red | M | | | | | Y | | | | Y | Resident |
| AB-45 | Red | M | | | | | Y | | | | Y | Resident |
| AB-46 | Red | M | | | | | Y | | | | Y | Resident |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role | | | |
|-------------------------------|------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------|-------------|----------|--------------|--|--|--|
| AB-17 | Red | M | (b) (4) | (b) (4) | | | Y | (b) (4) | | | Y | Resident | | | |
| AB-18 | Red | M | | | | | Y | | | Y | Staff | | | | |
| AB-26 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-27 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-28 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-29 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-30 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-22 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-23 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-24 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-40 | Red | M | | | | | Y | | | Y | Resident | | | | |
| BC-06 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-38 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-19 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-42 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-43 | Red | M | | | | | Y | | | Y | Resident | | | | |
| AB-44 | Red | M | | | | | Y | | | Y | Resident | | | | |
| Confirmed cases with most lik | | | | | | | | | | | | | | | |
| ON-03 | Red | M | | | | | | | | | | 2020-07-11 | | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| AB-08 | White | Y | (b) (4) | (b) (4) | | | | (b) (4) | | Raw | | |
| AB-112 | White | Y | | | | | | | | Raw | | |
| BC-11 | White | Y | | | | | | | 2020-06-28 | Raw | | |
| BC-64 | White | Y | | | | | | | | Raw | | |
| BC-41 | Other | M | | | | | Y | | 2020-07-04 | | | |
| AB-179 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| SK-04 | Red | Y | | | | | Y | | 2020-07-07 | Raw | | |
| BC-61 | Other | DK | | | | | Y | | | | | |
| BC-24 | Red | Y | | | | | | | 2020-06-28 | Raw | Y | Patron |
| BC-17 | Red | DK | | | | | Y | | | | | |
| BC-80 | Red | Y | | | | | Y | | 2020-07-14 | Raw | | |
| AB-201 | Red | Y | | | | | Y | | 2020-07-06 | Raw | | |
| AB-01 | Other | DK | | | | | Y | | | | | |
| AB-152 | Red | DK | | | | | Y | | | | | |
| AB-183 | Other | DK | | | | | P | | | | | |
| AB-63 | Red | M | | | | | Y | | 2020-07-02 | | Y | Staff |
| AB-64 | Red | Y | | | | | Y | | 2020-07-04 | Raw | Y | Patron |
| AB-65 | Other | DK | | | | | Y | | 2020-07-04 | | | |
| MB-02 | Other | N | | | | | Y | | | | | |
| MB-08 | Other | DK | | | | | P | | | | | |
| MB-09 | Red | Y | | | | | Y | | 2020-07-05 | | | |
| MB-12 | Red | DK | | | | | | | | | | |
| ON-01 | Red | Y | | | | | Y | | 2020-06-30 | Raw | Y | Patron |
| ON-02 | Red | Y | | | | | Y | | 2020-07-08 | | Y | Patron |
| BC-18 | Red | M | | | | | Y | | 2020-06-28 | | Y | Patron |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| BC-21 | Red | M | (b) (4) | (b) (4) | | | Y | (b) (4) | 2020-06-28 | Raw | Y | Patron |
| AB-171 | Red | Y | | | | | | | 2020-07-10 | Raw | | |
| AB-173 | Other | DK | | | | | Y | | | | | |
| AB-86 | Red | Y | | | | | Y | | 2020-06-26 | Raw | | |
| SK-09 | Other | DK | | | | | Y | | | | | |
| AB-142 | Other | DK | | | | | Y | | | | | |
| AB-59 | Red | DK | | | | | Y | | 2020-07-02 | | | |
| AB-60 | Red | M | | | | | Y | | 2020-07-04 | | Y | Patron |
| BC-69 | White | Y | | | | | Y | | | Raw | | |
| AB-134 | Other | DK | | | | | Y | | | | | |
| BC-85 | Other | DK | | | | | Y | | | | | |
| AB-114 | Red | Y | | | | | Y | | | | | |
| AB-78 | Red | Y | | | | | Y | | 2020-07-28 | Raw | | |
| AB-82 | Red | Y | | | | | Y | | 2020-06-28 | Raw | | |
| AB-88 | Other | DK | | | | | Y | | | | | |
| BC-79 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| Ab-113 | Red | Y | | | | | Y | | 2020-06-27 | | Y | Patron |
| AB-15 | Red | DK | | | | | Y | | 2020-06-27 | Raw | Y | Patron |
| AB-16 | Red | Y | | | | | Y | | 2020-06-30 | Raw | Y | Patron |
| AB-84 | Red | M | | | | | Y | | 2020-06-26 | | Y | Patron |
| QC-03 | White | M | | | | | Y | | | Raw | | |
| MB-06 | White | M | | | | | Y | | | Raw | | |
| SK-02 | White | N | | | | | Y | | 2020-07-13 | | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| OC-04 | Red | Y | (b) (4) | (b) (4) | (b) (4) | (b) (4) | (b) (4) | (b) (4) | | | | |
| AB-184 | Red | Y | | | | | | | 2020-07-11 | Raw | | |
| SK-05 | Red | P | | | | | | | | | | |
| BC-51 | Other | DK | | | | | | | 2020-07-12 | | | |
| BC-28 | White | P | | | | | | | 2020-07-09 | Cooked | | |
| AB-25 | Other | DK | | | | | | | 2020-07-13 | | Y | Patron |
| AB-61 | Red | DK | | | | | | | 2020-06-27 | | Y | Patron |
| AB-62 | Other | N | | | | | | | 2020-06-27 | | Y | Staff |
| AB-196 | Red | Y | | | | | | | 2020-07-04 | Raw | | |
| AB-119 | Red | Y | | | | | | | 2020-07-05 | Raw | | |
| | | | | | | | | | | | | |
| AB-159 | Red | Y | | | | | | | 2020-07-07 | Raw | | |
| BC-89 | White | DK | | | | | | | | Cooked | | |
| BC-49 | Red | Y | | | | | | | 2020-07-03 | Raw | | |
| SK-07 | Red | Y | | | | | | | 2020-07-16 | Raw | | |
| AB-77 | White | Y | | | | | | | | Cooked | | |
| AB-109 | Red | Y | | | | | | | 2020-06-29 | | | |
| BC-53 | Red | P | | | | | | | 2020-07-14 | Raw | | |
| AB-06 | Other | DK | | | | | | | | | | |
| BC-04 | Red | M | | | | | | | | | | |
| BC-33 | Red | P | | | | | | | | Raw | | |
| BC-40 | Red | P | | | | | | | 2020-07-18 | Raw | | |
| BC-60 | White | P | | | | | | | 2020-07-17 | | | |
| AB-72 | Other | Y | | | | | | | 2020-07-07 | Raw | | |
| | | | | | | | | | | | | |
| AB-75 | Red | Y | | | | | | | 2020-06-30 | Raw | Y | Patron |
| AB-104 | Red | Y | | | | | | | 2020-07-01 | Raw | Y | Staff |
| AB-180 | Other | DK | | | | | | | | | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| MB-03 | Red | Y | (b) (4) | (b) (4) | | | Y | (b) (4) | 2020-07-03 | Raw | | |
| AB-210 | Red | Y | | | | | Y | | 2020-07-12 | Raw | Y | Patron |
| AB-211 | Red | Y | | | | | Y | | 2020-07-13 | Raw | Y | Patron |
| AB-124 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| AB-136 | Red | Y | | | | | Y | | 2020-07-06 | Raw | Y | Patron |
| AB-150 | Red | DK | | | | | Y | | | | | |
| AB-209 | Red | Y | | | | | Y | | 2020-07-19 | Raw | Y | |
| BC-09 | Red | Y | | | | | Y | | | Raw | | |
| SK-19 | Red | M | | | | | Y | | 2020-07-11 | Raw | Y | Patron |
| | | | | | | | | | | | | |
| AB-141 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| AB-76 | Red | M | | | | | Y | | 2020-06-24 | Raw | Y | Patron |
| AB-140 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| AB-90 | Other | Y | | | | | Y | | 2020-06-24 | | | |
| BC-23 | Other | DK | | | | | Y | | 2020-06-27 | | | |
| MB-05 | Other | M | | | | | Y | | 2020-07-08 | | | |
| BC-73 | Red | Y | | | | | Y | | | | | |
| BC-76 | Other | N | | | | | P | | | | | |
| AB-118 | Other | P | | | | | Y | | 2020-07-11 | | | |
| AB-147 | Red | Y | | | | | | | 2020-07-05 | Raw | | |
| BC-14 | Red | Y | | | | | Y | | | Raw | Y | Patron |
| BC-65 | Red | Y | | | | | Y | | 2020-07-15 | Raw | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| MB-07 | Red | Y | (b) (4) | (b) (4) | | | Y | (b) (4) | 2020-07-07 | | | |
| AB-87 | Red | Y | | | | | Y | | 2020-06-20 | Raw | | |
| QC-01 | White | Y | | | | | | | | Cooked | | |
| BC-12 | Red | Y | | | | | Y | | 2020-07-01 | Cooked | Y | Patron |
| BC-15 | Red | P | | | | | Y | | 2020-07-01 | | Y | Patron |
| AB-89 | Other | DK | | | | | Y | | | | | |
| AB-153 | Red | Y | | | | | | | | Raw | | |
| AB-218 | Red | Y | | | | | | | 2020-07-10 | Raw | | |
| AB-221 | Red | Y | | | | | | | | Raw | | |
| AB-230 | Red | Y | | | | | | | 2020-07-13 | Raw | | |
| BC-67 | Red | Y | | | | | | | | | | |
| MB-01 | Red | Y | | | | | | | 2020-06-26 | Raw | | |
| AB-132 | Red | Y | | | | | Y | | 2020-07-04 | Raw | Y | Patron |
| AB-143 | Red | DK | | | | | Y | | | | Y | Patron |
| AB-66 | Red | Y | | | | | Y | | 2020-07-05 | Raw | Y | Patron |
| AB-67 | Other | DK | | | | | Y | | 2020-07-05 | | Y | Patron |
| AB-68 | Other | DK | | | | | Y | | 2020-07-05 | | Y | Patron |
| AB-69 | Red | Y | | | | | Y | | 2020-07-04 | Raw | Y | Patron |
| AB-74 | Red | M | | | | | Y | | 2020-07-05 | Raw | Y | Patron |
| BC-13 | Red | Y | | | | | Y | | 2020-06-28 | Raw | Y | Patron |
| BC-26 | White | P | | | | | Y | | 2020-06-28 | Raw | Y | Patron |
| BC-47 | Other | DK | | | | | Y | | | | | |
| BC-03 | Other | DK | | | | | Y | | | | | |
| AB-145 | Red | Y | | | | | | | | Raw | | |
| BC-78 | Red | Y | | | | | Y | | 2020-07-16 | Raw | | |
| AB-80 | Other | N | | | | | Y | | | | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role | | | |
|-------------------------------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|------------|--------------|--------|--------|--|
| MB-14 | Red | P | (b) (4) | (b) (4) | | | Y | (b) (4) | 2020-07-11 | Raw | | | | | |
| AB-133 | Red | Y | | | | | | | 2020-08-17 | Raw | Y | Patron | | | |
| AB-70 | Other | DK | | | | | Y | | 2020-07-03 | | Y | Patron | | | |
| AB-71 | Red | Y | | | | | Y | | 2020-07-06 | Raw | Y | Patron | | | |
| SK-01 | Other | P | | | | | Y | | 2020-07-06 | Cooked | | | | | |
| BC-56 | Red | P | | | | | | | | | Cooked | Y | Patron | | |
| BC-70 | White | Y | | | | | | | | | Raw | Y | Patron | | |
| BC-81 | Red | Y | | | | | | | Y | | | Y | Patron | | |
| BC-38 | Red | Y | | | | | | | | | | | | | |
| AB-107 | Red | M | | | | | | | | | 2020-06-29 | | Y | Patron | |
| AB-116 | Red | Y | | | | | | | Y | | 2020-06-30 | Raw | Y | Patron | |
| BC-72 | Red | Y | | | | | | | Y | | 2020-07-10 | Raw | | | |
| BC-71 | Red | Y | | | | | | | Y | | | | | | |
| AB-07 | Other | P | | | | | | | Y | | 2020-07-02 | | | | |
| AB-222 | White | Y | | | | | | | | | 2020-07-08 | Raw | | | |
| AB-233 | Red | Y | | | | | | | | | 2020-07-12 | Raw | | | |
| BC-57 | Other | DK | | | | | | | Y | | 2020-07-12 | | | | |
| AB-225 | White | Y | | | | | | | | | | | | | |
| Confirmed cases with "most li | | | | | | | | | | | | | | | |
| AB-227 | Red | Y | | | | | | | | | | | | | |
| AB-229 | Red | Y | | | | | | | | | | | Raw | | |
| QC-02 | Other | Y | | | | | | | | | | | Cooked | | |
| AB-106 | Red | Y | | | | | | | | | | | Cooked | | |
| AB-224 | White | Y | | | | | | | | | | | Raw | | |

| natid | Type | Reported Exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/ Cooked | Cluster | Cluster Role |
|--------|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------------|-------------|---------|--------------|
| AB-79 | Red | Y | (b) (4) | (b) (4) | | | | (b) (4) | | | | |
| AB-81 | Red | Y | | | | | | | | Raw | | |
| AB-85 | Red | Y | | | | | | | | | | |
| BC-68 | Red | Y | | | | | | | 2020-07-12 | Raw | | |
| AB-178 | Red | Y | | | | | | | | | | |
| AB-234 | Red | P | | | | | | | | | | |
| BC-08 | Red | DK | | | Y | Y | | | | | | |
| BC-16 | Red | DK | | | Y | Y | | | 2020-06-04 | | | |
| BC-19 | White | DK | | | Y | Y | | | 2020-06-20 | | | |
| BC-31 | Red | Y | | | Y | Y | | | 2020-06-26 | | | |
| BC-32 | Red | Y | | | | | | | 2020-05-14 | | | |
| BC-45 | Other | DK | | | Y | Y | | | 2020-05-12 | | | |
| BC-63 | Red | Y | | | Y | N | | | | | | |
| BC-74 | Red | Y | | | Y | Y | | | 2020-07-17 | Raw | | |
| BC-77 | Red | Y | | | | | | | | | | |
| BC-88 | Red | Y | | | N | | Y | | | Raw | | |
| MB-11 | White | Y | | | | | | | | Raw | | |
| BC-75 | White | Y | | | | | | | | Cooked | | |
| BC-66 | White | P | | | | | | | | | | |
| BC-84 | Red | DK | | | | | | | | | | |
| SK-03 | Red | Y | | | | | | | 2020-07-02 | Raw | | |
| SK-06 | Other | DK | | | | | | | | | | |
| AB-226 | Red | Y | | | | | | | 2020-07-15 | Raw | | |
| BC-05 | Red | M | | | | | Y | | | Raw | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| National ID | Type | Reported exposure | Store / Facility Name | Supplier | Purchase records available | Appears on purchase records | Links to Thomson | Address | Date | Raw/Cooked | Cluster | Cluster Role |
|---|-------|-------------------|-----------------------|----------|----------------------------|-----------------------------|------------------|---------|------|------------|---------|--------------|
| Confirmed cases with most likely onion exposure at a residential facility | | | | | | | | | | | | |
| AB-58 | Red | M | (b) (4) | (b) (4) | | | Y | (b) (4) | | | Y | Resident |
| BC-29 | Red | Y | | | | | Y | | | | Y | Resident |
| BC-86 | Other | DK | | | | | Y | | | | Y | Resident |
| AB-20 | Red | M | | | | | Y | | | | Y | Resident |
| AB-32 | Red | DK | | | | | Y | | | | Y | Resident |
| AB-33 | Red | M | | | | | Y | | | | Y | Resident |
| AB-34 | Red | M | | | | | Y | | | | Y | Staff |
| AB-35 | Red | M | | | | | Y | | | | Y | Resident |
| AB-21 | Red | M | | | | | Y | | | | Y | Resident |
| AB-37 | Red | M | | | | | Y | | | | Y | Resident |
| PE-01 | Other | P | | | | | Y | | | Cooked | Y | Staff |
| AB-181 | Other | DK | | | | | Y | | | | | |
| AB-36 | Red | M | | | | | Y | | | | Y | Resident |
| AB-31 | Red | M | | | | | Y | | | | Y | Resident |
| BC-44 | Other | DK | | | | | Y | | | | Y | Resident |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | | |
|-------|-------|----|---------|--|--|---|---------|--|--|-----|----------|
| BC-07 | Red | M | (b) (4) | | | Y | (b) (4) | | | Y | Resident |
| BC-25 | Red | M | | | | Y | | | | Y | Resident |
| BC-35 | Red | DK | | | | Y | | | | Y | Resident |
| BC-87 | Other | DK | | | | Y | | | | Raw | Staff |
| AB-12 | Red | M | | | | Y | | | | Y | Resident |
| AB-13 | Red | M | | | | Y | | | | Y | Resident |
| AB-47 | Red | M | | | | Y | | | | Y | Resident |
| AB-48 | Red | M | | | | Y | | | | Y | Resident |
| AB-49 | Red | M | | | | Y | | | | Y | Resident |
| AB-50 | Red | M | | | | Y | | | | Y | Resident |
| AB-51 | Red | M | | | | Y | | | | Y | Resident |
| AB-52 | Red | M | | | | Y | | | | Y | Resident |
| AB-53 | Red | M | | | | Y | | | | Y | Resident |
| AB-54 | Red | M | | | | Y | | | | Y | Resident |
| AB-55 | Red | DK | | | | Y | | | | Y | Resident |
| AB-56 | Red | M | | | | Y | | | | Y | Resident |
| AB-57 | Red | M | | | | Y | | | | Y | Resident |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | | |
|--------|-------|----|---------|--|--|---|---------|--|--|---|----------|
| AB-198 | White | P | (b) (4) | | | Y | (b) (4) | | | | |
| AB-121 | Red | M | | | | | | | | Y | Resident |
| AB-41 | Red | DK | | | | | | | | Y | Staff |
| AB-39 | Red | M | | | | Y | | | | Y | Staff |
| AB-128 | Red | M | | | | Y | | | | Y | Resident |
| AB-45 | Red | M | | | | Y | | | | Y | Resident |
| AB-46 | Red | M | | | | Y | | | | Y | Resident |
| AB-17 | Red | M | | | | Y | | | | Y | Resident |
| AB-18 | Red | M | | | | Y | | | | Y | Staff |
| AB-26 | Red | DK | | | | Y | | | | Y | Resident |
| AB-27 | Red | M | | | | Y | | | | Y | Resident |
| AB-28 | Red | M | | | | Y | | | | Y | Resident |
| AB-29 | Red | DK | | | | Y | | | | Y | Resident |
| AB-30 | Red | DK | | | | Y | | | | Y | Resident |
| AB-22 | Red | M | | | | Y | | | | Y | Resident |
| AB-23 | Red | DK | | | | Y | | | | Y | Resident |
| AB-24 | Red | M | | | | Y | | | | Y | Resident |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | |
|--------------------------------|-------|---|---------|--|---|------------|--|--------|----------|
| AB-40 | Red | M | (b) (4) | | Y | (b) (4) | | Y | Resident |
| BC-06 | Red | M | | | Y | | | Y | Resident |
| AB-38 | Red | M | | | Y | | | Y | Resident |
| AB-19 | Red | M | | | Y | | | Y | Resident |
| AB-42 | Red | M | | | Y | | | Y | Resident |
| AB-43 | Red | M | | | Y | | | Y | Resident |
| AB-44 | Red | M | | | Y | | | Y | Resident |
| Confirmed cases with most like | | | | | | | | | |
| ON-03 | Red | M | | | | 2020-07-11 | | | |
| AB-08 | White | Y | | | | Raw | | | |
| AB-112 | White | Y | | | | Raw | | | |
| BC-101 | Red | Y | | | | | | | |
| BC-11 | White | Y | | | | 2020-06-28 | | Raw | |
| BC-95 | White | Y | | | | 2020-07-26 | | Raw | |
| BC-98 | Red | Y | | | | | | | |
| BC-41 | Other | M | | | Y | 2020-07-04 | | | |
| MB-17 | Red | P | | | Y | 2020-07-11 | | Cooked | |
| AB-179 | Red | Y | | | Y | | | Raw | Y Patron |
| SK-21 | Red | M | | | Y | 2020-07-06 | | Raw | Y Patron |
| SK-22 | Red | P | | | Y | 2020-07-06 | | Raw | Y Patron |
| SK-24 | Red | Y | | | Y | 2020-07-13 | | | Y Patron |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|--|---|---------|------------|-----|---|--------|
| SK-04 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-07-07 | Raw | | |
| BC-61 | Other | DK | | | Y | | | | | |
| BC-24 | Red | Y | | | | | 2020-06-28 | Raw | Y | Patron |
| BC-17 | Red | DK | | | Y | | | | | |
| BC-80 | Red | Y | | | Y | | 2020-07-14 | Raw | | |
| AB-201 | Red | Y | | | Y | | 2020-07-06 | Raw | | |
| AB-119 | Red | Y | | | Y | | 2020-07-05 | Raw | | |
| AB-63 | Red | M | | | Y | | 2020-07-02 | | Y | Staff |
| AB-64 | Red | Y | | | Y | | 2020-07-04 | Raw | Y | Patron |
| AB-65 | Other | DK | | | Y | | 2020-07-04 | | Y | Patron |
| AB-01 | Other | DK | | | | | | | | |
| AB-152 | Red | DK | | | | | | | | |
| AB-183 | Other | DK | | | | | | | | |
| AB-282 | Red | M | | | Y | | 2020-07-07 | Raw | | |
| BC-36 | Other | DK | | | | | 2020-07-10 | | | |
| MB-02 | Other | N | | | Y | | | | | |
| MB-08 | Other | DK | | | | | | | | |
| MB-09 | Red | Y | | | Y | | 2020-07-05 | | | |
| MB-12 | Red | DK | | | | | | | | |
| SK-30 | Red | P | | | Y | | 2020-07-17 | | | |
| ON-01 | Red | Y | | | Y | | 2020-06-30 | Raw | Y | Patron |
| ON-02 | Red | Y | | | Y | | 2020-07-08 | | Y | Patron |
| BC-18 | Red | M | | | Y | | 2020-06-28 | | Y | Patron |
| BC-21 | Red | M | | | Y | | 2020-06-28 | Raw | Y | Patron |
| AB-171 | Red | Y | | | | | 2020-07-10 | Raw | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|--|---|---------|------------|--------|---|--------|
| BC-08 | Red | DK | (b) (4) | | Y | (b) (4) | | | | |
| ON-04 | Red | Y | | | Y | | 2020-07-12 | | | |
| AB-86 | Red | Y | | | Y | | 2020-06-26 | Raw | | |
| SK-09 | Other | DK | | | Y | | | | | |
| AB-142 | Other | DK | | | Y | | | | | |
| AB-60 | Red | M | | | Y | | 2020-07-04 | | Y | Patron |
| AB-149 | Other | DK | | | Y | | 2020-06-08 | | | |
| AB-59 | Red | DK | | | Y | | 2020-07-02 | | | |
| BC-69 | White | Y | | | Y | | | Raw | | |
| AB-134 | Other | DK | | | Y | | | | | |
| BC-64 | Red | Y | | | N | | 2020-07-15 | | | |
| BC-85 | Other | DK | | | Y | | | | | |
| ON-09 | White | Y | | | | | | Cooked | | |
| AB-114 | Red | Y | | | Y | | | | | |
| AB-78 | Red | Y | | | Y | | 2020-07-28 | Raw | | |
| AB-82 | Red | Y | (b) (4) | | Y | | 2020-06-28 | Raw | | |
| AB-88 | Other | DK | | | Y | | | | | |
| BC-79 | Red | Y | | | Y | | | Raw | Y | Patron |
| Ab-113 | Red | Y | | | Y | | 2020-06-27 | | Y | Patron |
| AB-15 | Red | DK | | | Y | | 2020-06-27 | Raw | Y | Patron |
| AB-16 | Red | Y | | | Y | | 2020-06-30 | Raw | Y | Patron |
| AB-84 | Red | M | | | Y | | 2020-06-26 | | Y | Patron |
| QC-03 | Other | DK | | | Y | | | Raw | | |
| MB-06 | White | M | | | Y | | | Raw | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|--|---|---------|------------|--------|---|--------|
| AB-212 | White | Y | (b) (4) | | Y | (b) (4) | 2020-07-05 | Raw | | |
| SK-02 | White | N | | | Y | | 2020-07-13 | | | |
| QC-04 | Red | Y | | | | | | | | |
| BC-39 | Red | P | | | Y | | 2020-07-08 | Cooked | | |
| AB-184 | Red | Y | | | Y | | 2020-07-11 | Raw | | |
| BC-51 | Other | DK | | | P | | 2020-07-12 | | | |
| SK-05 | Red | P | | | | | | | | |
| BC-28 | White | P | | | Y | | 2020-07-09 | Cooked | | |
| AB-242 | White | Y | | | | | | Raw | | |
| AB-25 | Other | DK | | | Y | | 2020-07-13 | | Y | Patron |
| AB-61 | Red | DK | | | Y | | 2020-06-27 | | Y | Patron |
| AB-62 | Other | N | | | Y | | 2020-06-27 | | Y | Staff |
| AB-196 | Red | Y | | | | | 2020-07-04 | Raw | | |
| AB-159 | Red | Y | | | Y | | 2020-07-07 | Raw | | |
| AB-251 | Red | DK | | | Y | | 2020-07-10 | | | |
| BC-49 | Red | Y | | | | | 2020-07-03 | Raw | | |
| AB-223 | Red | M | | | Y | | | Raw | | |
| SK-16 | Red | P | | | Y | | | | Y | Patron |
| SK-07 | Red | Y | | | Y | | 2020-07-16 | Raw | | |
| AB-77 | White | Y | | | Y | | | Cooked | | |
| AB-109 | Red | Y | | | Y | | 2020-06-29 | | | |
| BC-53 | Red | P | | | | | 2020-07-14 | Raw | | |
| AB-06 | Other | DK | | | Y | | | | | |
| BC-99 | White | Y | | | Y | | 2020-07-26 | Raw | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | | |
|--------|-------|----|---------|--|--|---|---------|------------|-----|---|----------|
| AB-253 | Red | Y | (b) (4) | | | Y | (b) (4) | | Raw | | |
| BC-04 | Red | M | | | | | | | | | |
| BC-33 | Red | P | | | | Y | | | Raw | | |
| BC-40 | Red | P | | | | Y | | 2020-07-18 | Raw | | |
| BC-60 | White | P | | | | | | 2020-07-17 | | | |
| AB-72 | Other | Y | | | | | | 2020-07-07 | Raw | | |
| AB-75 | Red | Y | | | | Y | | 2020-06-30 | Raw | Y | Patron |
| AB-104 | Red | Y | | | | Y | | 2020-07-01 | Raw | Y | Staff |
| AB-180 | Red | Y | | | | Y | | 2020-07-10 | | | |
| MB-03 | Red | Y | | | | Y | | 2020-07-03 | Raw | | |
| AB-210 | Red | Y | | | | Y | | 2020-07-12 | Raw | Y | Resident |
| AB-211 | Red | Y | | | | Y | | 2020-07-13 | Raw | Y | Patron |
| AB-178 | Other | DK | | | | Y | | 2020-07-09 | Raw | | |
| AB-232 | Other | P | | | | Y | | | | | |
| BC-96 | Red | Y | | | | | | | | | |
| AB-136 | Red | Y | | | | Y | | 2020-07-06 | Raw | Y | Patron |
| AB-209 | Red | Y | | | | Y | | 2020-07-19 | Raw | Y | Patron |
| AB-150 | Red | DK | | | | Y | | | | | |
| AB-275 | Red | Y | | | | Y | | 2020-07-08 | Raw | | |
| AB-194 | Red | Y | | | | Y | | 2020-07-04 | Raw | Y | Patron |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|--|---|---------|------------|-----|---|--------|
| BC-09 | Red | Y | (b) (4) | | Y | (b) (4) | | Raw | | |
| BC-55 | Red | Y | | | Y | | | Raw | | |
| SK-19 | Red | M | | | Y | | 2020-07-11 | Raw | Y | Patron |
| AB-124 | Red | Y | | | Y | | | Raw | Y | Patron |
| AB-141 | Red | Y | | | Y | | | Raw | Y | Patron |
| AB-76 | Red | M | | | Y | | 2020-06-24 | Raw | Y | Patron |
| AB-140 | Red | Y | | | Y | | | Raw | | |
| AB-90 | Other | Y | | | Y | | 2020-06-24 | | | |
| BC-23 | Other | DK | | | Y | | 2020-06-27 | | | |
| BC-58 | White | P | | | Y | | 2020-06-28 | Raw | | |
| MB-05 | Other | M | | | Y | | 2020-07-08 | | | |
| BC-73 | Red | Y | | | Y | | | | | |
| BC-76 | Other | N | | | P | | | | | |
| AB-118 | Other | P | | | Y | | 2020-07-11 | | | |
| AB-147 | Red | Y | | | | | 2020-07-05 | Raw | | |
| BC-14 | Red | Y | | | Y | | | Raw | | |
| BC-54 | Red | Y | | | Y | | | Raw | | |
| BC-65 | Red | Y | | | Y | | 2020-07-15 | Raw | | |
| MB-07 | Red | Y | | | Y | | 2020-07-07 | | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | | |
|--------|-------|----|---------|--|--|---|---------|------------|--------|---|--------|
| AB-87 | Red | Y | (b) (4) | | | Y | (b) (4) | 2020-06-20 | Raw | | |
| QC-01 | White | Y | | | | | | | Cooked | | |
| AB-157 | Red | Y | | | | Y | | 2020-07-05 | Raw | | |
| BC-83 | Other | Y | | | | | | | | | |
| BC-12 | Other | Y | | | | Y | | 2020-07-01 | Cooked | Y | Patron |
| MB-16 | Red | Y | | | | | | | Raw | | |
| BC-59 | Red | Y | | | | Y | | 2020-07-10 | | | |
| AB-89 | Other | DK | | | | Y | | | | | |
| AB-151 | Red | Y | | | | | | | Raw | | |
| AB-153 | Red | Y | | | | | | 2020-07-12 | Raw | | |
| AB-160 | Red | Y | | | | | | 2020-07-08 | Raw | | |
| AB-177 | Red | Y | | | | | | 2020-07-10 | Raw | | |
| AB-185 | Red | Y | | | | | | 2020-07-03 | Raw | | |
| AB-218 | Red | Y | | | | | | 2020-07-10 | Raw | | |
| AB-221 | Red | Y | | | | | | | Raw | | |
| AB-230 | Red | Y | | | | | | 2020-07-13 | Raw | | |
| BC-67 | Red | Y | | | | | | | | | |
| MB-01 | Red | Y | | | | | | 2020-06-26 | Raw | | |
| QC-11 | Other | DK | | | | | | 2020-07-10 | | | |
| AB-132 | Red | Y | | | | Y | | 2020-07-04 | Raw | Y | Patron |
| AB-143 | Red | DK | | | | Y | | | | Y | Patron |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|--|---|---------|------------|--------|---|--------|
| AB-66 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-07-05 | Raw | Y | Patron |
| AB-67 | Other | DK | (b) (4) | | Y | (b) (4) | 2020-07-05 | | Y | Patron |
| AB-68 | Other | DK | (b) (4) | | Y | (b) (4) | 2020-07-05 | | Y | Patron |
| AB-69 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-07-04 | Raw | Y | Patron |
| AB-74 | Red | M | (b) (4) | | Y | (b) (4) | 2020-07-05 | Raw | Y | Patron |
| BC-13 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-06-28 | Raw | Y | Patron |
| BC-26 | White | P | (b) (4) | | Y | (b) (4) | 2020-06-28 | Raw | Y | Patron |
| BC-47 | Other | DK | (b) (4) | | Y | (b) (4) | | | | |
| BC-03 | Other | DK | (b) (4) | | Y | (b) (4) | | | | |
| BC-15 | Other | Y | (b) (4) | | Y | (b) (4) | 2020-06-27 | Cooked | Y | Patron |
| AB-145 | Red | Y | (b) (4) | | | (b) (4) | | Raw | | |
| BC-78 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-07-16 | Raw | | |
| AB-80 | Other | N | (b) (4) | | Y | (b) (4) | | | | |
| MB-14 | Red | P | (b) (4) | | Y | (b) (4) | 2020-07-11 | Raw | | |
| AB-133 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-08-17 | Raw | Y | Patron |
| AB-148 | Other | DK | (b) (4) | | Y | (b) (4) | 2020-07-03 | | Y | Patron |
| AB-70 | Other | DK | (b) (4) | | Y | (b) (4) | 2020-07-03 | | Y | Patron |
| AB-71 | Red | Y | (b) (4) | | Y | (b) (4) | 2020-07-06 | Raw | Y | Patron |
| BC-10 | White | DK | (b) (4) | | Y | (b) (4) | 2020-07-06 | | | |
| SK-01 | Other | P | (b) (4) | | Y | (b) (4) | 2020-07-06 | Cooked | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | | |
|--|-------|----|--------|----------|---|---|--------|---|--------|---|--------|
| BC-70 | White | Y | (b)(4) | | | | (b)(4) | | Raw | Y | Patron |
| BC-56 | Red | P | (b)(4) | | | Y | (b)(4) | | Cooked | Y | Patron |
| BC-81 | Red | Y | (b)(4) | | | Y | (b)(4) | | | Y | Patron |
| BC-38 | Red | Y | (b)(4) | | | | (b)(4) | | | | |
| AB-193 | Red | Y | (b)(4) | | | Y | (b)(4) | 2020-07-12 | Raw | | |
| AB-107 | Red | M | (b)(4) | | | | (b)(4) | 2020-06-29 | | Y | Patron |
| AB-116 | Red | Y | (b)(4) | | | Y | (b)(4) | 2020-06-30 | Raw | Y | Patron |
| AB-03 | Other | DK | (b)(4) | | | Y | (b)(4) | | | | |
| BC-72 | Red | Y | (b)(4) | | | Y | (b)(4) | 2020-07-10 | Raw | | |
| BC-71 | Red | Y | (b)(4) | | | Y | (b)(4) | | | | |
| AB-07 | Other | P | (b)(4) | | | Y | (b)(4) | 2020-07-02 | | | |
| AB-222 | White | Y | (b)(4) | | | | (b)(4) | 2020-07-08 | Raw | | |
| AB-233 | Red | Y | (b)(4) | | | | (b)(4) | 2020-07-12 | Raw | | |
| BC-102 | Other | DK | (b)(4) | | | Y | (b)(4) | | | | |
| BC-57 | Other | DK | (b)(4) | | | Y | (b)(4) | 2020-07-12 | | | |
| BC-92 | White | P | (b)(4) | | | Y | (b)(4) | 2020-07-22 | Cooked | | |
| Confirmed cases with most likely onion exposure at a grocery store | | | | | | | | | | | |
| AB-227 | Red | Y | (b)(4) | | | | (b)(4) | | | | |
| AB-229 | Red | Y | (b)(4) | | | | (b)(4) | | Raw | | |
| AB-176 | Red | Y | (b)(4) | | | | (b)(4) | | Raw | | |
| AB-225 | White | Y | (b)(4) | | Y | Y | N | May 13 | | | |
| QC-09 | White | DK | Costco | Onions52 | | | Y | 870 MONTÉE DES PIONNIERS, TERREBONNE, QC | Cooked | | |
| QC-455 | Other | DK | Costco | Onions52 | | | Y | | | | |
| BC-90 | Other | Y | (b)(4) | (b)(4) | | | Y | (b)(4) | | | |

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| | | | | | | | | | | | |
|--------|-------|----|---------|---|---|---|---------|-----------------------------|--------|--|--|
| BC-89 | White | DK | (b) (4) | | | Y | (b) (4) | | Cooked | | |
| QC-02 | Other | Y | | | | | | | Cooked | | |
| BC-104 | Red | Y | | | | Y | | | Raw | | |
| QC-06 | White | P | | | | | | | Cooked | | |
| AB-106 | Red | Y | | | | | | | Cooked | | |
| BC-02 | Other | DK | | | | Y | | | | | |
| QC-12 | White | Y | | | | | | | Raw | | |
| AB-224 | White | Y | | | | | | | Raw | | |
| AB-79 | Red | Y | | | | | | | | | |
| AB-81 | Red | Y | | | | | | | Raw | | |
| AB-85 | Red | Y | | | | | | | | | |
| BC-68 | Red | Y | | | | | | | | | |
| AB-186 | Red | Y | | N | | Y | | 2020-07-12 | Raw | | |
| AB-203 | Red | Y | | | | | | 2020-07-03 to 2020-07-06 | Raw | | |
| AB-234 | Red | P | | | | | | | Raw | | |
| BC-16 | Red | DK | | Y | Y | | | June 4 | | | |
| BC-19 | White | DK | | Y | Y | | | 2020-06-20 | | | |
| BC-31 | Red | Y | | Y | Y | | | June 26, July 9 | | | |
| BC-32 | Red | Y | | | | | | 2020-05-14 | | | |

Appendix B: "Most likely" onion exposure for each confirmed case with sufficient information; including details of exposure location, variety of onions, purchase records, and links to Thomson International

| | | | | | | | | | | |
|--------|-------|----|---------|---|---|---------|------------|--------|--|--|
| BC-45 | Other | DK | (b) (4) | Y | Y | (b) (4) | 2020-05-12 | | | |
| BC-63 | Red | Y | | Y | N | | | | | |
| BC-74 | Red | Y | | Y | Y | | July 17 | Raw | | |
| BC-77 | Red | Y | | | | | | | | |
| BC-88 | Red | Y | | N | | | | Raw | | |
| QC-13 | Red | P | | | | | | Cooked | | |
| BC-100 | Red | P | | | | | | Raw | | |
| MB-11 | White | Y | | | | | | Raw | | |
| MB-15 | White | Y | | Y | Y | | 2020-07-14 | Cooked | | |
| BC-103 | Red | Y | | | | | | Raw | | |
| BC-75 | White | Y | | Y | N | | | Cooked | | |
| AB-263 | Red | Y | | | | | | Raw | | |
| BC-05 | Red | M | | Y | Y | | July 2 | Raw | | |

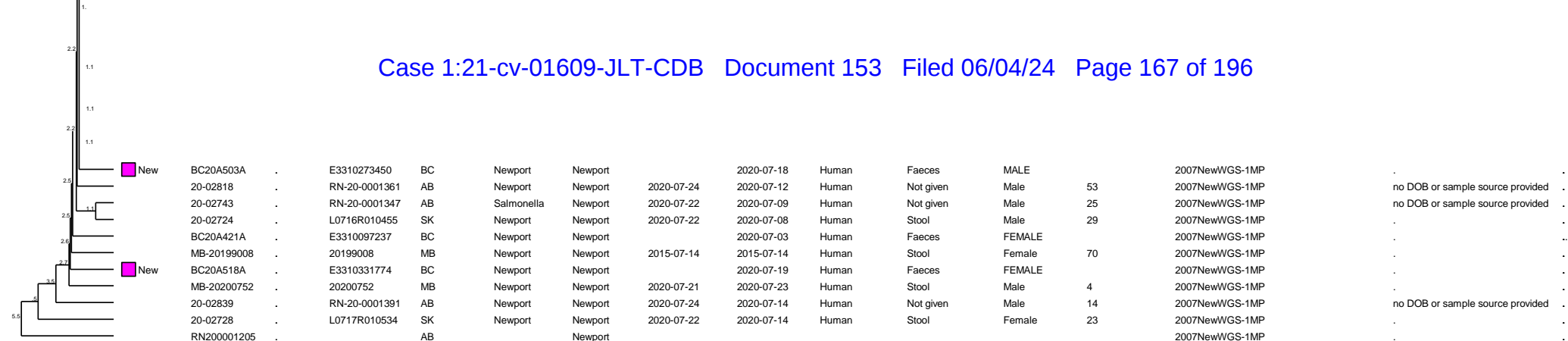
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| 8 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 | 370 | 380 | 390 | 400 | 410 | 420 | 430 | 440 | 450 | 460 | 470 | 480 | 490 | 500 | 510 | 520 | 530 | 540 | 550 | 560 | 570 | 580 | 590 | 600 | 610 | 620 | 630 | 640 | 650 | 660 | 670 | 680 | 690 | 700 | 710 | 720 | 730 | 740 | 750 | 760 | 770 | 780 | 790 | 800 | 810 | 820 | 830 | 840 | 850 | 860 | 870 | 880 | 890 | 900 | 910 | 920 | 930 | 940 | 950 | 960 | 970 | 980 | 990 | 1000 | 1010 | 1020 | 1030 | 1040 | 1050 | 1060 | 1070 | 1080 | 1090 | 1100 | 1110 | 1120 | 1130 | 1140 | 1150 | 1160 | 1170 | 1180 | 1190 | 1200 | 1210 | 1220 | 1230 | 1240 | 1250 | 1260 | 1270 | 1280 | 1290 | 1300 | 1310 | 1320 | 1330 | 1340 | 1350 | 1360 | 1370 | 1380 | 1390 | 1400 | 1410 | 1420 | 1430 | 1440 | 1450 | 1460 | 1470 | 1480 | 1490 | 1500 | 1510 | 1520 | 1530 | 1540 | 1550 | 1560 | 1570 | 1580 | 1590 | 1600 | 1610 | 1620 | 1630 | 1640 | 1650 | 1660 | 1670 | 1680 | 1690 | 1700 | 1710 | 1720 | 1730 | 1740 | 1750 | 1760 | 1770 | 1780 | 1790 | 1800 | 1810 | 1820 | 1830 | 1840 | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | 2090 | 2100 | 2110 | 2120 | 2130 | 2140 | 2150 | 2160 | 2170 | 2180 | 2190 | 2200 | 2210 | 2220 | 2230 | 2240 | 2250 | 2260 | 2270 | 2280 | 2290 | 2300 | 2310 | 2320 | 2330 | 2340 | 2350 | 2360 | 2370 | 2380 | 2390 | 2400 | 2410 | 2420 | 2430 | 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 | 2510 | 2520 | 2530 | 2540 | 2550 | 2560 | 2570 | 2580 | 2590 | 2600 | 2610 | 2620 | 2630 | 2640 | 2650 | 2660 | 2670 | 2680 | 2690 | 2700 | 2710 | 2720 | 2730 | 2740 | 2750 | 2760 | 2770 | 2780 | 2790 | 2800 | 2810 | 2820 | 2830 | 2840 | 2850 | 2860 | 2870 | 2880 | 2890 | 2900 | 2910 | 2920 | 2930 | 2940 | 2950 | 2960 | 2970 | 2980 | 2990 | 3000 | 3010 | 3020 | 3030 | 3040 | 3050 | 3060 | 3070 | 3080 | 3090 | 3100 | 3110 | 3120 | 3130 | 3140 | 3150 | 3160 | 3170 | 3180 | 3190 | 3200 | 3210 | 3220 | 3230 | 3240 | 3250 | 3260 | 3270 | 3280 | 3290 | 3300 | 3310 | 3320 | 3330 | 3340 | 3350 | 3360 | 3370 | 3380 | 3390 | 3400 | 3410 | 3420 | 3430 | 3440 | 3450 | 3460 | 3470 | 3480 | 3490 | 3500 | 3510 | 3520 | 3530 | 3540 | 3550 | 3560 | 3570 | 3580 | 3590 | 3600 | 3610 | 3620 | 3630 | 3640 | 3650 | 3660 | 3670 | 3680 | 3690 | 3700 | 3710 | 3720 | 3730 | 3740 | 3750 | 3760 | 3770 | 3780 | 3790 | 3800 | 3810 | 3820 | 3830 | 3840 | 3850 | 3860 | 3870 | 3880 | 3890 | 3900 | 3910 | 3920 | 3930 | 3940 | 3950 | 3960 | 3970 | 3980 | 3990 | 4000 | 4010 | 4020 | 4030 | 4040 | 4050 | 4060 | 4070 | 4080 | 4090 | 4100 | 4110 | 4120 | 4130 | 4140 | 4150 | 4160 | 4170 | 4180 | 4190 | 4200 | 4210 | 4220 | 4230 | 4240 | 4250 | 4260 | 4270 | 4280 | 4290 | 4300 | 4310 | 4320 | 4330 | 4340 | 4350 | 4360 | 4370 | 4380 | 4390 | 4400 | 4410 | 4420 | 4430 | 4440 | 4450 | 4460 | 4470 | 4480 | 4490 | 4500 | 4510 | 4520 | 4530 | 4540 | 4550 | 4560 | 4570 | 4580 | 4590 | 4600 | 4610 | 4620 | 4630 | 4640 | 4650 | 4660 | 4670 | 4680 | 4690 | 4700 | 4710 | 4720 | 4730 | 4740 | 4750 | 4760 | 4770 | 4780 | 4790 | 4800 | 4810 | 4820 | 4830 | 4840 | 4850 | 4860 | 4870 | 4880 | 4890 | 4900 | 4910 | 4920 | 4930 | 4940 | 4950 | 4960 | 4970 | 4980 | 4990 | 5000 | 5010 | 5020 | 5030 | 5040 | 5050 | 5060 | 5070 | 5080 | 5090 | 5100 | 5110 | 5120 | 5130 | 5140 | 5150 | 5160 | 5170 | 5180 | 5190 | 5200 | 5210 | 5220 | 5230 | 5240 | 5250 | 5260 | 5270 | 5280 | 5290 | 5300 | 5310 | 5320 | 5330 | 5340 | 5350 | 5360 | 5370 | 5380 | 5390 | 5400 | 5410 | 5420 | 5430 | 5440 | 5450 | 5460 | 5470 | 5480 | 5490 | 5500 | 5510 | 5520 | 5530 | 5540 | 5550 | 5560 | 5570 | 5580 | 5590 | 5600 | 5610 | 5620 | 5630 | 5640 | 5650 | 5660 | 5670 | 5680 | 5690 | 5700 | 5710 | 5720 | 5730 | 5740 | 5750 | 5760 | 5770 | 5780 | 5790 | 5800 | 5810 | 5820 | 5830 | 5840 | 5850 | 5860 | 5870 | 5880 | 5890 | 5900 | 5910 | 5920 | 5930 | 5940 | 5950 | 5960 | 5970 | 5980 | 5990 | 6000 | 6010 | 6020 | 6030 | 6040 | 6050 | 6060 | 6070 | 6080 | 6090 | 6100 | 6110 | 6120 | 6130 | 6140 | 6150 | 6160 | 6170 | 6180 | 6190 | 6200 | 6210 | 6220 | 6230 | 6240 | 6250 | 6260 | 6270 | 6280 | 6290 | 6300 | 6310 | 6320 | 6330 | 6340 | 6350 | 6360 | 6370 | 6380 | 6390 | 6400 | 6410 | 6420 | 6430 | 6440 | 6450 | 6460 | 6470 | 6480 | 6490 | 6500 | 6510 | 6520 | 6530 | 6540 | 6550 | 6560 | 6570 | 6580 | 6590 | 6600 | 6610 | 6620 | 6630 | 6640 | 6650 | 6660 | 6670 | 6680 | 6690 | 6700 | 6710 | 6720 | 6730 | 6740 | 6750 | 6760 | 6770 | 6780 | 6790 | 6800 | 6810 | 6820 | 6830 | 6840 | 6850 | 6860 | 6870 | 6880 | 6890 | 6900 | 6910 | 6920 | 6930 | 6940 | 6950 | 6960 | 6970 | 6980 | 6990 | 7000 | 7010 | 7020 | 7030 | 7040 | 7050 | 7060 | 7070 | 7080 | 7090 | 7100 | 7110 | 7120 | 7130 | 7140 | 7150 | 7160 | 7170 | 7180 | 7190 | 7200 | 7210 | 7220 | 7230 | 7240 | 7250 | 7260 | 7270 | 7280 | 7290 | 7300 | 7310 | 7320 | 7330 | 7340 | 7350 | 7360 | 7370 | 7380 | 7390 | 7400 | 7410 | 7420 | 7430 | 7440 | 7450 | 7460 | 7470 | 7480 | 7490 | 7500 | 7510 | 7520 | 7530 | 7540 | 7550 | 7560 | 7570 | 7580 | 7590 | 7600 | 7610 | 7620 | 7630 | 7640 | 7650 | 7660 | 7670 | 7680 | 7690 | 7700 | 7710 | 7720 | 7730 | 7740 | 7750 | 7760 | 7770 | 7780 | 7790 | 7800 | 7810 | 7820 | 7830 | 7840 | 7850 | 7860 | 7870 | 7880 | 7890 | 7900 | 7910 | 7920 | 7930 | 7940 | 7950 | 7960 | 7970 | 7980 | 7990 | 8000 | 8010 | 8020 | 8030 | 8040 | 8050 | 8060 | 8070 | 8080 | 8090 | 8100 | 8110 | 8120 | 8130 | 8140 | 8150 | 8160 | 8170 | 8180 | 8190 | 8200 | 8210 | 8220 | 8230 | 8240 | 8250 | 8260 | 8270 | 8280 | 8290 | 8300 | 8310 | 8320 | 8330 | 8340 | 8350 | 8360 | 8370 | 8380 | 8390 | 8400 | 8410 | 8420 | 8430 | 8440 | 8450 | 8460 | 8470 | 8480 | 8490 | 8500 | 8510 | 8520 | 8530 | 8540 | 8550 | 8560 | 8570 | 8580 | 8590 | 8600 | 8610 | 8620 | 8630 | 8640 | 8650 | 8660 | 8670 | 8680 | 8690 | 8700 | 8710 | 8720 | 8730 | 8740 | 8750 | 8760 | 8770 | 8780 | 8790 | 8800 | 8810 | 8820 | 8830 | 8840 | 8850 | 8860 | 8870 | 8880 | 8890 | 8900 | 8910 | 8920 | 8930 | 8940 | 8950 | 8960 | 8970 | 8980 | 8990 | 9000 | 9010 | 9020 | 9030 | 9040 | 9050 | 9060 | 9070 | 9080 | 9090 | 9100 | 9110 | 9120 | 9130 | 9140 | 9150 | 9160 | 9170 | 9180 | 9190 | 9200 | 9210 | 9220 | 9230 | 9240 | 9250 | 9260 | 9270 | 9280 | 9290 | 9300 | 9310 | 9320 | 9330 | 9340 | 9350 | 9360 | 9370 | 9380 | 9390 | 9400 | 9410 | 9420 | 9430 | 9440 | 9450 | 9460 | 9470 | 9480 | 9490 | 9500 | 9510 | 9520 | 9530 | 9540 | 9550 | 9560 | 9570 | 9580 | 9590 | 9600 | 9610 | 9620 | 9630 | 9640 | 9650 | 9660 | 9670 | 9680 | 9690 | 9700 | 9710 | 9720 | 9730 | 9740 | 9750 | 9760 | 9770 | 9780 | 9790 | 9800 | 9810 | 9820 | 9830 | 9840 | 9850 | 9860 | 9870 | 9880 | 9890 | 9900 | 9910 | 9920 | 9930 | 9940 | 9950 | 9960 | 9970 | 9980 | 9990 | 10000 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

134 (b) New

| | | | | | | | | | | | | | | | | |
|-----|-------------|---|---------------|----|------------|---------|------------|------------|-------|-----------|--------|----|----------------|---|----------------------------------|---|
| | 20-02860 | . | RN-20-0001422 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Female | 55 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02807 | . | L0722R010835 | SK | Newport | Newport | 2020-07-24 | 2020-07-15 | Human | Stool | Female | 23 | 2007NewWGS-1MP | . | . | . |
| | BC20A523A | . | E3310331938 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A514A | . | E33103319859 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A520A | . | E3310331820 | BC | Newport | Newport | | 2020-07-20 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A507A | . | E3310255764 | BC | Newport | Newport | | 2020-07-21 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A526A | . | E3310331858 | BC | Newport | Newport | | 2020-07-23 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A517A | . | E3310331678 | BC | Newport | Newport | | 2020-07-19 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A519A | . | E3310331807 | BC | Newport | Newport | | 2020-07-20 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A504A | . | E3310274918 | BC | Newport | Newport | | 2020-07-17 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A511A | . | E33103319881 | BC | Newport | Newport | | 2020-07-23 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A506A | . | E3310302189 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A513A | . | E33103319782 | BC | Newport | Newport | | 2020-07-24 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A516A | . | E3310331658 | BC | Newport | Newport | | 2020-07-21 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A510A | . | E3310300516 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A509A | . | E3310300498 | BC | Newport | Newport | | 2020-07-21 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A524A | . | E3310331838 | BC | Newport | Newport | | 2020-07-20 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A508A | . | E3310300478 | BC | Newport | Newport | | 2020-07-21 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | MB-20199006 | . | 20199006 | MB | Newport | Newport | 2020-07-14 | 2020-07-14 | HUMAN | STOOL | Female | 29 | 2007NewWGS-1MP | . | . | . |
| | 20-02861 | . | RN-20-0001423 | AB | Newport | Newport | 2020-07-24 | 2020-07-12 | Human | Not given | Female | 28 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | MB-20200570 | . | 20200570 | MB | Newport | Newport | 2015-07-17 | 2015-07-13 | Human | Stool | Male | 31 | 2007NewWGS-1MP | . | . | . |
| | MB-20200697 | . | 20200697 | MB | Newport | Newport | 2020-07-21 | 2020-07-23 | Human | Stool | Female | 44 | 2007NewWGS-1MP | . | . | . |
| | BC20A478A | . | E3310246080 | BC | Newport | Newport | | 2020-07-16 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| New | BC20A525A | . | E3310331869 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | 20-02857 | . | RN-20-0001419 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Female | 62 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02893 | . | RN-20-0001473 | AB | Newport | Newport | 2020-07-24 | 2020-07-16 | Human | Not given | Male | 59 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02899 | . | RN-20-0001480 | AB | Newport | Newport | 2020-07-24 | 2020-07-19 | Human | Not given | Female | 84 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | BC20A425A | . | E3310125206 | BC | Newport | Newport | | 2020-07-07 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A424A | . | E3310124511 | BC | Newport | Newport | | 2020-07-07 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| | BC20A474A | . | E3310246284 | BC | Newport | Newport | | 2020-07-13 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A522A | . | E3310331901 | BC | Newport | Newport | | 2020-07-23 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| New | BC20A430A | . | E33101172129 | BC | Newport | Newport | | 2020-07-09 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | 20-02808 | . | RN-20-0001348 | AB | Newport | Newport | 2020-07-24 | 2020-07-10 | Human | Not given | Female | 77 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02846 | . | RN-20-0001406 | AB | Newport | Newport | 2020-07-24 | 2020-07-13 | Human | Not given | Male | 27 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02854 | . | RN-20-0001416 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Male | 23 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | BC20A459A | . | E3310198052 | BC | Newport | Newport | | 2020-07-13 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| | 20-02848 | . | RN-20-0001409 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Male | 87 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02873 | . | RN-20-0001437 | AB | Newport | Newport | 2020-07-24 | 2020-07-16 | Human | Not given | Male | 87 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02891 | . | RN-20-0001471 | AB | Newport | Newport | 2020-07-24 | 2020-07-16 | Human | Not given | Female | 44 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02841 | . | RN-20-0001394 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Female | 42 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02787 | . | RN-20-0001321 | AB | Newport | Newport | 2020-07-22 | 2020-07-09 | Human | Not given | Male | 24 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02881 | . | RN-20-0001458 | AB | Newport | Newport | 2020-07-24 | 2020-07-16 | Human | Not given | Male | 89 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02838 | . | RN-20-0001390 | AB | Newport | Newport | 2020-07-24 | 2020-07-13 | Human | Not given | Female | 23 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02831 | . | RN-20-0001379 | AB | Newport | Newport | 2020-07-24 | 2020-07-12 | Human | Not given | Female | 30 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02815 | . | RN-20-0001356 | AB | Newport | Newport | 2020-07-24 | 2020-07-11 | Human | Not given | Male | 23 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02882 | . | RN-20-0001459 | AB | Newport | Newport | 2020-07-24 | 2020-07-16 | Human | Not given | Male | 73 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02852 | . | RN-20-0001414 | AB | Newport | Newport | 2020-07-24 | 2020-07-15 | Human | Not given | Male | 18 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | RN200001231 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | RN200001329 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | RN200001222 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | RN200001197 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | RN200001292 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | 20-02790 | . | RN-20-0001322 | AB | Newport | Newport | 2020-07-22 | 2020-07-08 | Human | Not given | Female | 49 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02725 | . | L0717R010523 | SK | Newport | Newport | 2020-07-22 | 2020-07-09 | Human | Stool | Male | 68 | 2007NewWGS-1MP | . | . | . |
| | 20-02879 | . | RN-20-0001456 | AB | Newport | Newport | 2020-07-24 | 2020-07-15 | Human | Not given | Male | 96 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02849 | . | RN-20-0001411 | AB | Newport | Newport | 2020-07-24 | 2020-07-13 | Human | Not given | Female | 39 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02878 | . | RN-20-0001449 | AB | Newport | Newport | 2020-07-24 | 2020-07-15 | Human | Not given | Female | 10 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | BC20A467A | . | E3310235751 | BC | Newport | Newport | | 2020-07-17 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| | 20-02785 | . | RN-20-0001320 | AB | Newport | Newport | 2020-07-22 | 2020-07-09 | Human | Not given | Female | 26 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | RN200001301 | . | RN-20-0001301 | AB | Newport | Newport | | 2020-07-10 | | | Male | 46 | 2007NewWGS-1MP | . | . | . |
| New | BC20A505A | . | E3310273420 | BC | Newport | Newport | | 2020-07-16 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A465A | . | E3310197999 | BC | Newport | Newport | | 2020-07-13 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A435A | . | E3310154846 | BC | Newport | Newport | | 2020-07-09 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A475A | . | E3310243574 | BC | Newport | Newport | | 2020-07-17 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| | MB-20200490 | . | 20200490 | MB | Newport | Newport | 2015-07-16 | 2015-07-15 | Human | Stool | Female | 38 | 2007NewWGS-1MP | . | . | . |
| New | BC20A515A | . | E3310262734 | BC | Newport | Newport | | 2020-07-21 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |
| | BC20A441A | . | E3310175589 | BC | Newport | Newport | | 2020-07-13 | Human | Blood | Female | | 2007NewWGS-1MP | . | . | . |
| | BC20A458A | . | E3310199487 | BC | Newport | Newport | | 2020-07-14 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | RN200001534 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | RN200001199 | . | | AB | Newport | Newport | | | | | | | 2007NewWGS-1MP | . | . | . |
| | 20-02876 | . | RN-20-0001447 | AB | Newport | Newport | 2020-07-24 | 2020-07-15 | Human | Not given | Female | 41 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| New | BC20A512A | . | E3310319901 | BC | Newport | Newport | | 2020-07-24 | Human | Faeces | Female | | 2007NewWGS-1MP | . | . | . |
| | 20-02845 | . | RN-20-0001405 | AB | Newport | Newport | 2020-07-24 | 2020-07-13 | Human | Not given | Female | 31 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02742 | . | RN-20-0001341 | AB | Salmonella | Newport | 2020-07-22 | 2020-07-09 | Human | Not given | Female | 19 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| | 20-02726 | . | L0717R010525 | SK | Newport | Newport | 2020-07-22 | 2020-07-15 | Human | Stool | Female | 16 | 2007NewWGS-1MP | . | . | . |
| | 20-02855 | . | RN-20-0001417 | AB | Newport | Newport | 2020-07-24 | 2020-07-14 | Human | Not given | Male | 30 | 2007NewWGS-1MP | . | no DOB or sample source provided | . |
| New | BC20A521A | . | E3310331864 | BC | Newport | Newport | | 2020-07-22 | Human | Faeces | MALE | | 2007NewWGS-1MP | . | . | . |



Comparison generated using BioNumericsv 7.6.3 based on 4571 alleles. All isolates included in the analysis would be considered related by wgMLST. The wgMLSTdifferences indicated at the nodes were calculated using UPGMA and therefore, are not whole numbers. To determine the nearest whole number value, round up if the digit following the decimal is 5 or greater; round down if the digit following the decimal is less than 4.

PulseNetCanada 2020-08-04

CFSAN Biostatistics and Bioinformatics Staff WGS Analysis Report

Report Title: Report_SalRedOnion_Thomson_20 1020

Firm Name: Thomson International, Inc (Bakersfield, CA)

Pathogen: Salmonella

Sample or Facts IDs:

1146715,1146716,146754,146755,146713,146714,146757,146791,146797,146795

Date Generated: 20 October, 2020

Bioinformatician: Yan Luo

WGS Interpretation:

141 isolates have been WGS analyzed, including 4 sediment samples (1146715, 1146716, 146754, and 1146755), water ultrafiltration samples (1146713, 1146714, 146757, 146791, 146797), and 1 scat sample (1146795) collected from Thomson International Inc. (Bakersfield, CA). Isolate FDA1146716-S001-001 showed abnormal genome size (~5.9Mb). The rest of 140 isolates were found to belong to possibly 17 different Salmonella strains listed below.

- 1) Cluster1 (S. Montevideo) 6 isolates from sub 2 of sample 1146754 were genetically identical to one another, representing the same strain, which was also likely a match to a sprouts sample collected in 2012 and 48 clinical isolates (majority were from outbreak 1801MLJX-1), with less than 16 SNPs. (for better resolution, the tree shown below is a subset tree of a large SNP cluster, which can be found at https://www.ncbi.nlm.nih.gov/pathogens/tree#Salmonella/PDG000000002.1980/PDS000027136?key=n9EeSWwrqV_-n54zn__p1ViPLQ7bewU1GqkA8VongTcS5IL8ks)
- 2) Cluster2 (S. Montevideo) 28 isolates were genetically identical to one another, representing the same strain, including 3 isolates from sub1 of sample 1146754, 1 isolate from sub1 and 1 isolate from sub2 of sample 1146714, 1 isolate from sub1 and 5 isolates from sub2 of sample 1146757, and 2 isolates from sub1 of sample 1146791. 7 isolates were genetically identical to one another, representing the same strain, including 1 isolate from sub1, 12 isolates from sub2, and 14 isolates from sub3 of sample 1146755. However, it's inconclusive whether these two strains were the same strain or not. It's also inconclusive whether they matched anything else in the database. (for better resolution, the tree shown below is a subset tree of a large SNP cluster which can be found at https://www.ncbi.nlm.nih.gov/pathogens/tree#Salmonella/PDG000000002.1980/PDS000028037.132?key=ltgXIZZDUzCfWDRYR0BRAewzm4fBo5_tgHGAKcl_4PBgkCA)
- 3) Cluster3 (S. subsp. arizonae) FDA1146715-S002-001, FDA1146715-S003-001, and FDA1146716-S003-001 were genetically identical to one another, representing the same strain. This strain was a unique strain in the database with no other closely related isolates. (https://www.ncbi.nlm.nih.gov/pathogens/tree#Salmonella/PDG000000002.1980/PDS000070968.1?key=B0mG26a5Y800DVShVW01NZTd_RrvkYjosjBA6Gy-vi4t_b3lrc)
- 4) Cluster4 (S. Newport) 24 isolates were genetically identical to one another, representing the same strain, including 5 isolates from sub4 of sample 1146715, 1 isolate from sub2 of sample 1146754, 1 isolate from sub2 of

- sample 146712, isolates from sub1 and 3 isolates from sub2 of sample 146714, isolates from sub1 and 3 isolates from sub2 of sample 146757, and 1 isolate from sub2 of sample 146791. This strain matched 6 clinical isolates collected between 2017 and 2019.
- 5) Cluster 5 (S. Muenchen): 6 isolates were genetically identical to one another, representing the same strain, including 1 isolate from sub2 of sample 146757 and 5 isolates from sub2 of sample 146716. This strain matched 2 clinical isolates from 2019. It's also possible that this strain was the same strain that caused the alfalfa sprout outbreak in 2016 (1601MLJ6-1).
 - 6) Cluster 6 (S. subsp. arizonae): It's highly likely that FDA1146716-S004-001 and FDA1146795-S001-001 matched the environmental sample collected from water canal in CA within 16 SNPs. No other isolates were found to be closely related to these three samples (https://www.ncbi.nlm.nih.gov/pathogens/tree#Salmonella/PDG000000002.1980/PDS000070967.2?key=15IWN_5VOyFs4QxNDYFt2fCrmYe-hUz8dIIE62WmPux8ozLjUqM).
 - 7) Cluster 7 (S. subsp. houtenae): FDA1146714-2-RXG was a unique strain in the database with no other closely related isolates.
 - 8) Cluster 8 (S. Newport): FDA1146791-2-THB and FDA1146791-1-RHG were genetically identical to each other, representing the same strain, which matched a food sample collected from AZ in 2015. It's inconclusive whether this strain was the same strain as 1 raw organic spinach isolate collected from AZ in 2018 and 6 clinical isolates from 2018.
 - 9) Cluster 9 (S. Anatum): 2 isolates from sub1 of sample 146797 were genetically identical to each other, representing the same strain. It's inconclusive whether this strain matched anything else in the database.
 - 10) Cluster 10 (S. Tennessee): 3 isolates from sub1 and 2 isolates from sub2 of sample 146797 were genetically identical to one another, representing the same strain. This strain was unique in the database with no other closely related isolates.
 - 11) Cluster 11 (S. Tennessee): FDA1146797-1-TXB and FDA1146797-2-TXA were genetically identical to each other, representing the same strain. It's possible that this strain also matched isolates BCW_6535.
 - 12) Cluster 12 (S. Taksony): FDA1146797-2-TXB and FDA1146797-2-THG were genetically identical to each other, representing the same strain. This strain was unique in the database with no other closely related isolates.
 - 13) Cluster 13 (S. Thompson): 6 isolates were genetically identical, representing the same strain, including 3 isolates from sub1 and 3 isolates from sub2 of sample 146791. It's inconclusive whether this strain matched anything else in the database.
 - 14) Cluster 14 (S. Braenderup): 9 isolates were genetically identical, representing the same strain, including 4 isolates from sub1 and 5 isolates from sub2 of sample 146791. This strain matched a clinical isolate from 2017.
 - 15) Cluster 15 (S. Elomrane): FDA1146791-1-RHA was a unique strain in the database, with no other closely related isolates.
 - 16) Cluster 16 (S. Senftenberg): FDA1146791-1-THA was highly related to 2 other food isolates and 13 clinical isolates, but it was inconclusive whether there was a match among all those isolates.

In summary, about 17 different strains were identified from the 140 isolates, including 5 unique strains with no closely related isolates, and 4 strains that had clinical matches. But none of the 140 isolates was related to the onion outbreak strain.

NCBI SNPCluster ID(s): PDS000027237.135, PDS000028037.131, PDS000070968.1, PDS000051782.9, PDS000028057.8, PDS000070967.2, PDS000032341.9, PDS000028248.6, PDS000071575.1, PDS000031270.15, PDS000071572.1, PDS000032705.469, PDS000027685.2, PDS000031947.17

Cluster(s) can be monitored by searching for ID here.

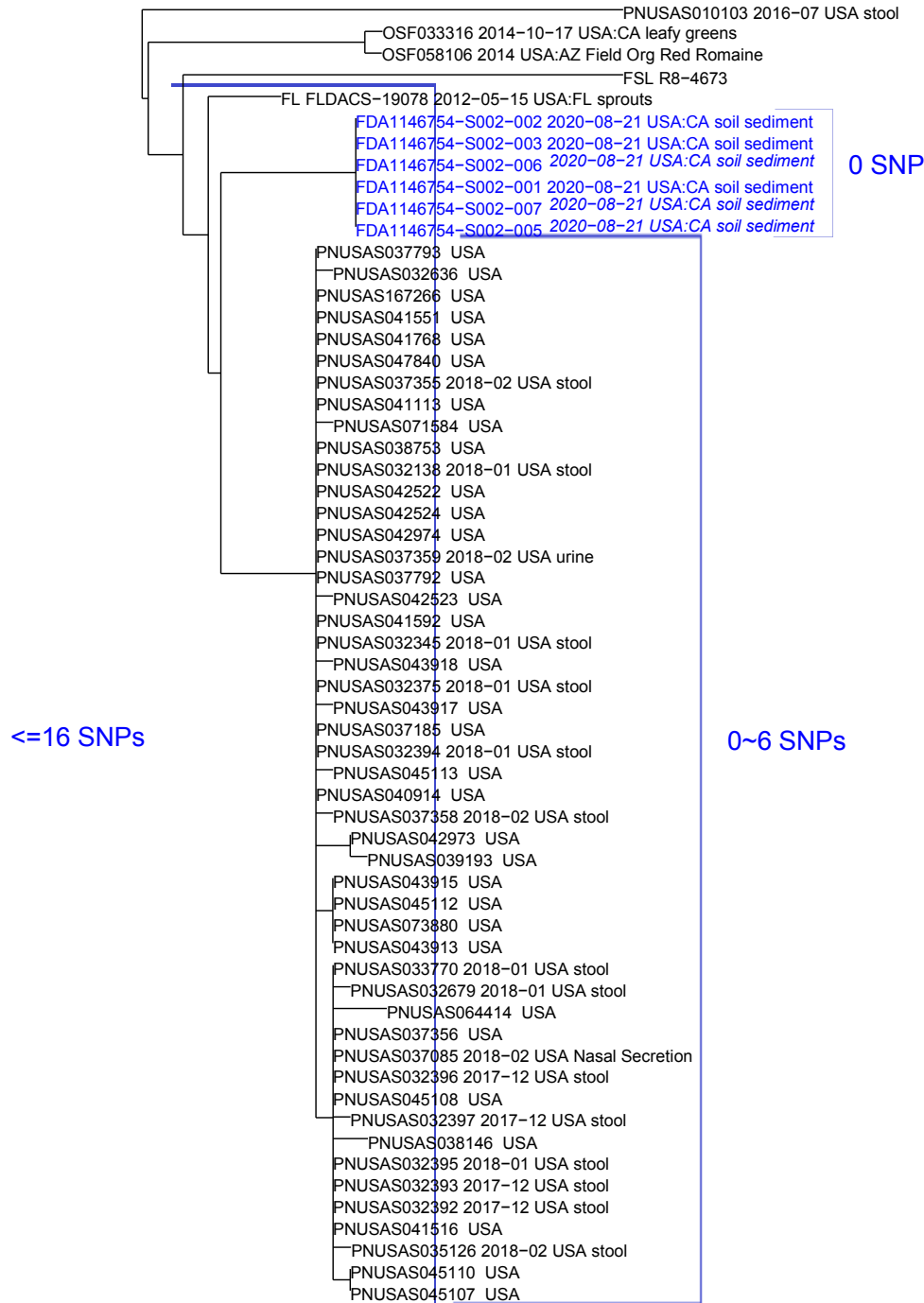
CFSAN SNP Pipeline Version: v2.1.0

See below for phylogenetic clusters (if they were generated).

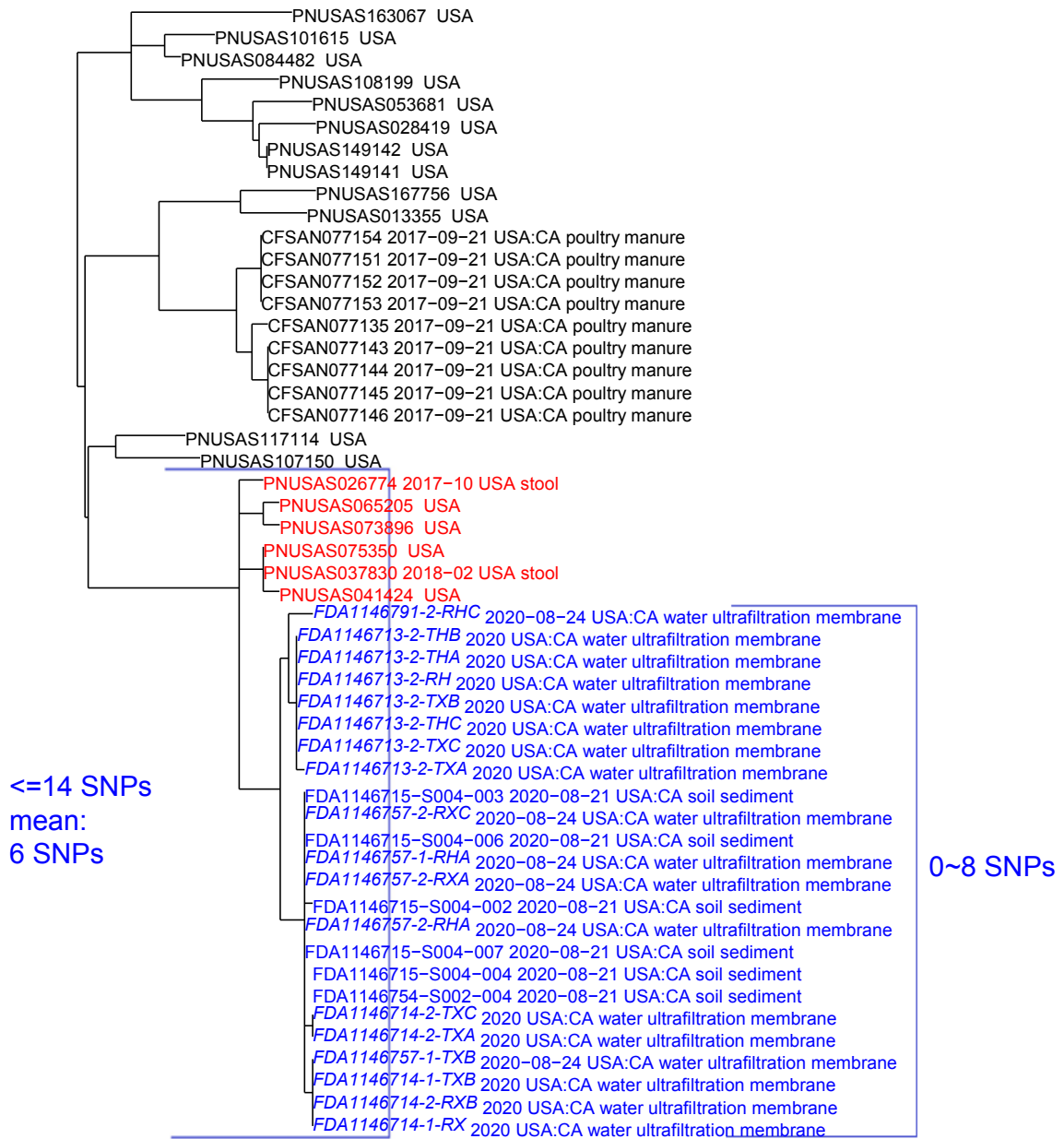
References

- Information about the CFSAN SNP Pipeline can be found <https://peerj.com/articles/cs-20/>.
 - Information on the interpretation of SNP distances and those clusters can be found <https://www.frontiersin.org/articles/10.3389/fmicb.2018.01482/full>.
-

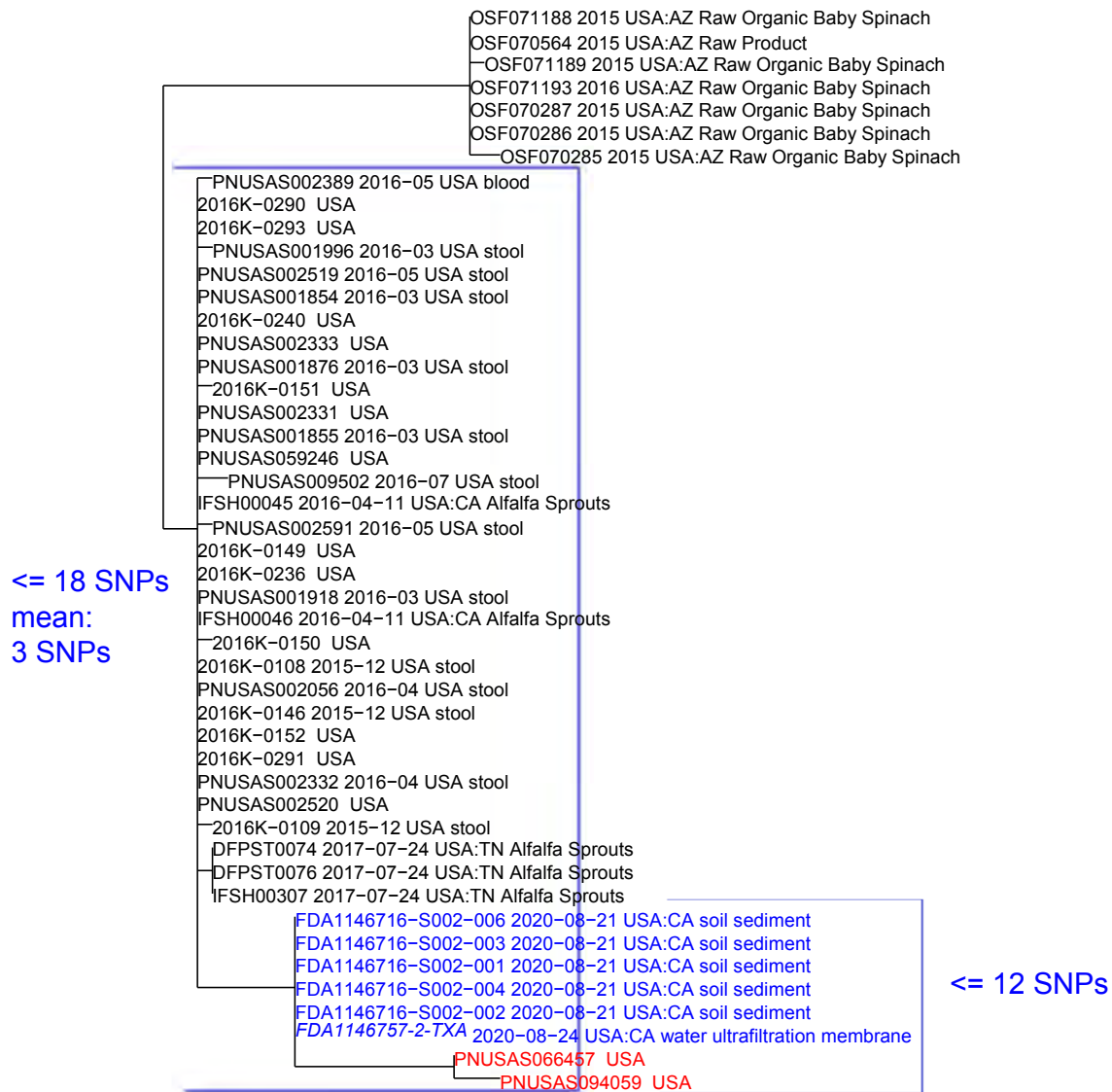
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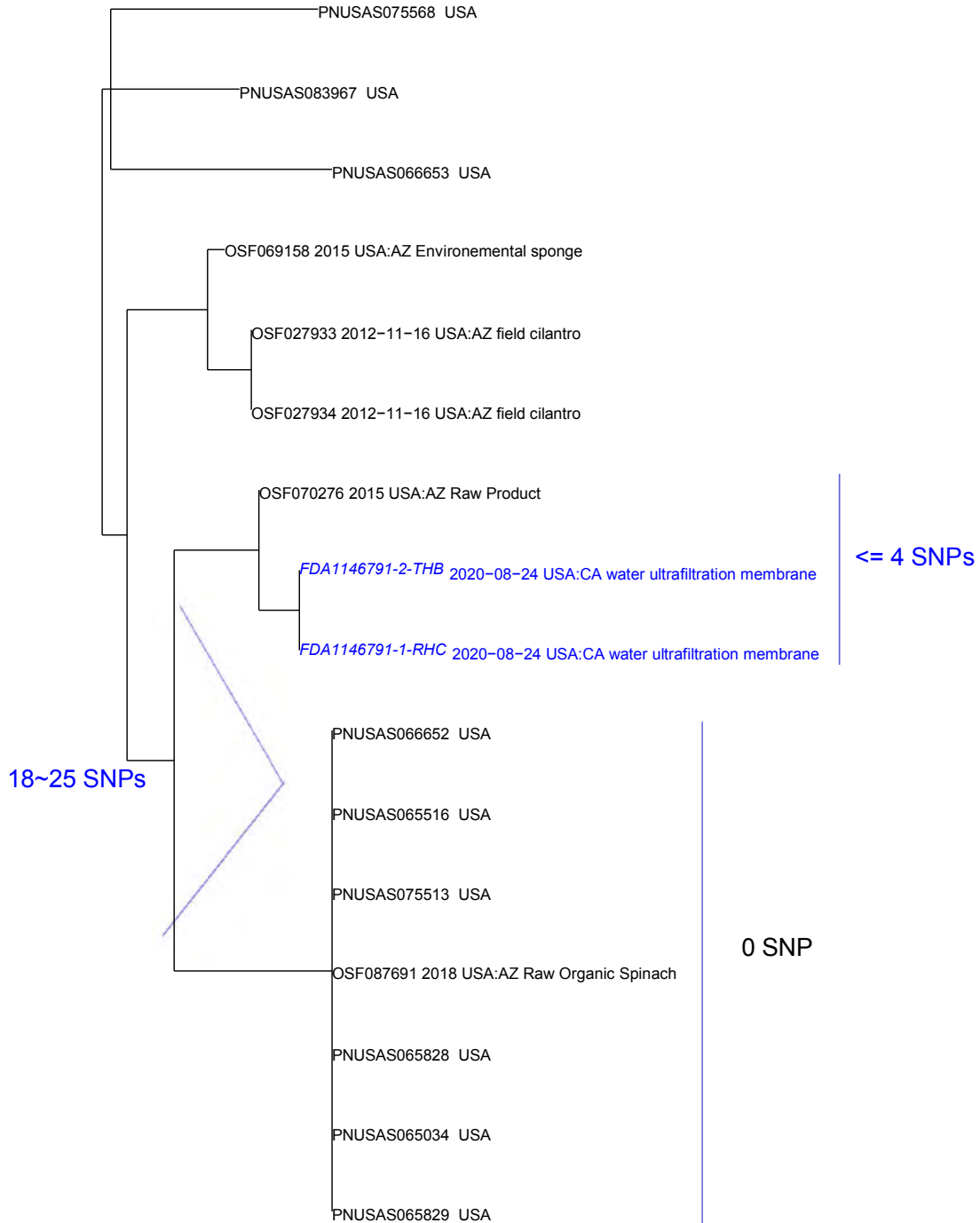
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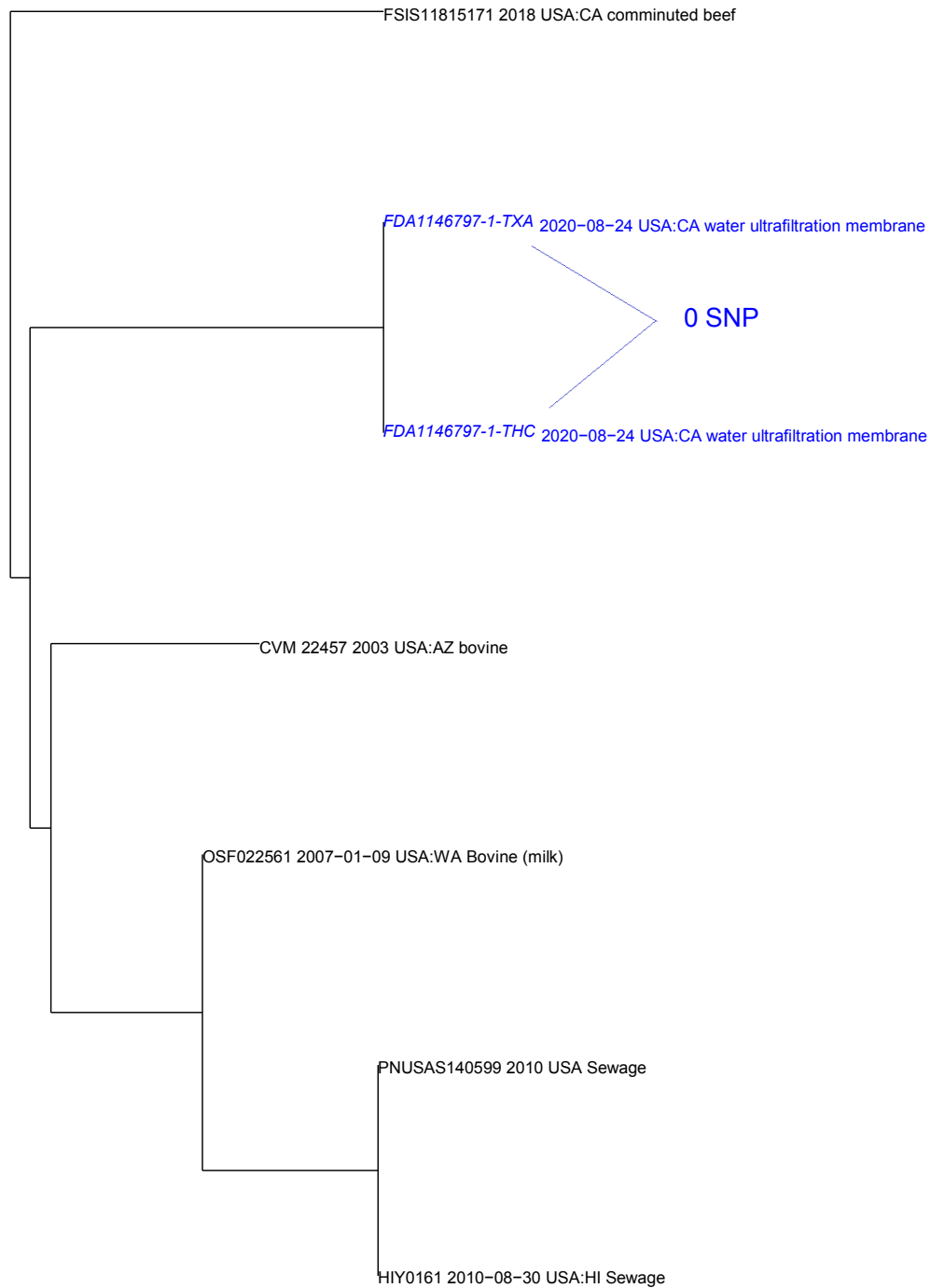
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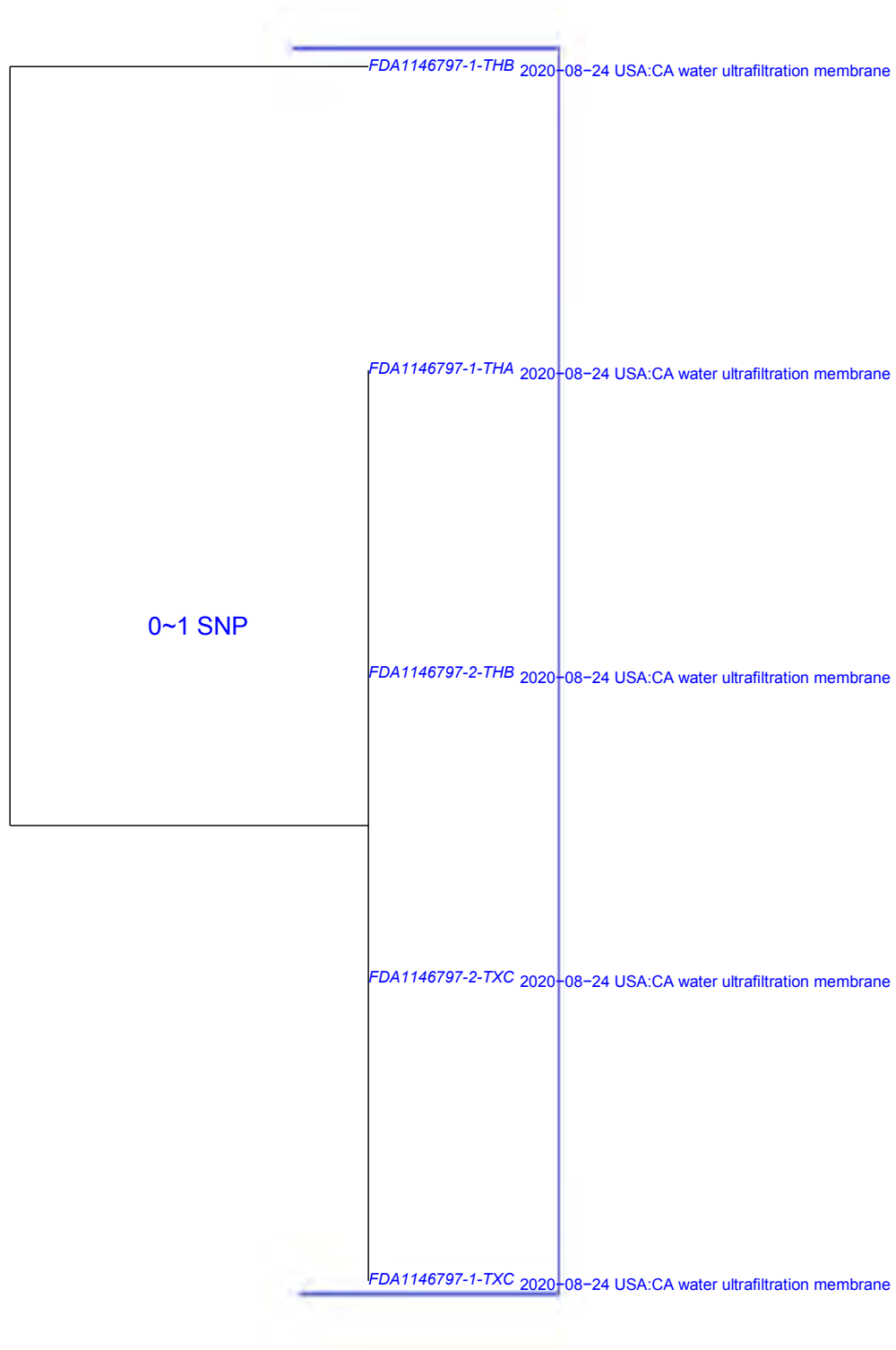
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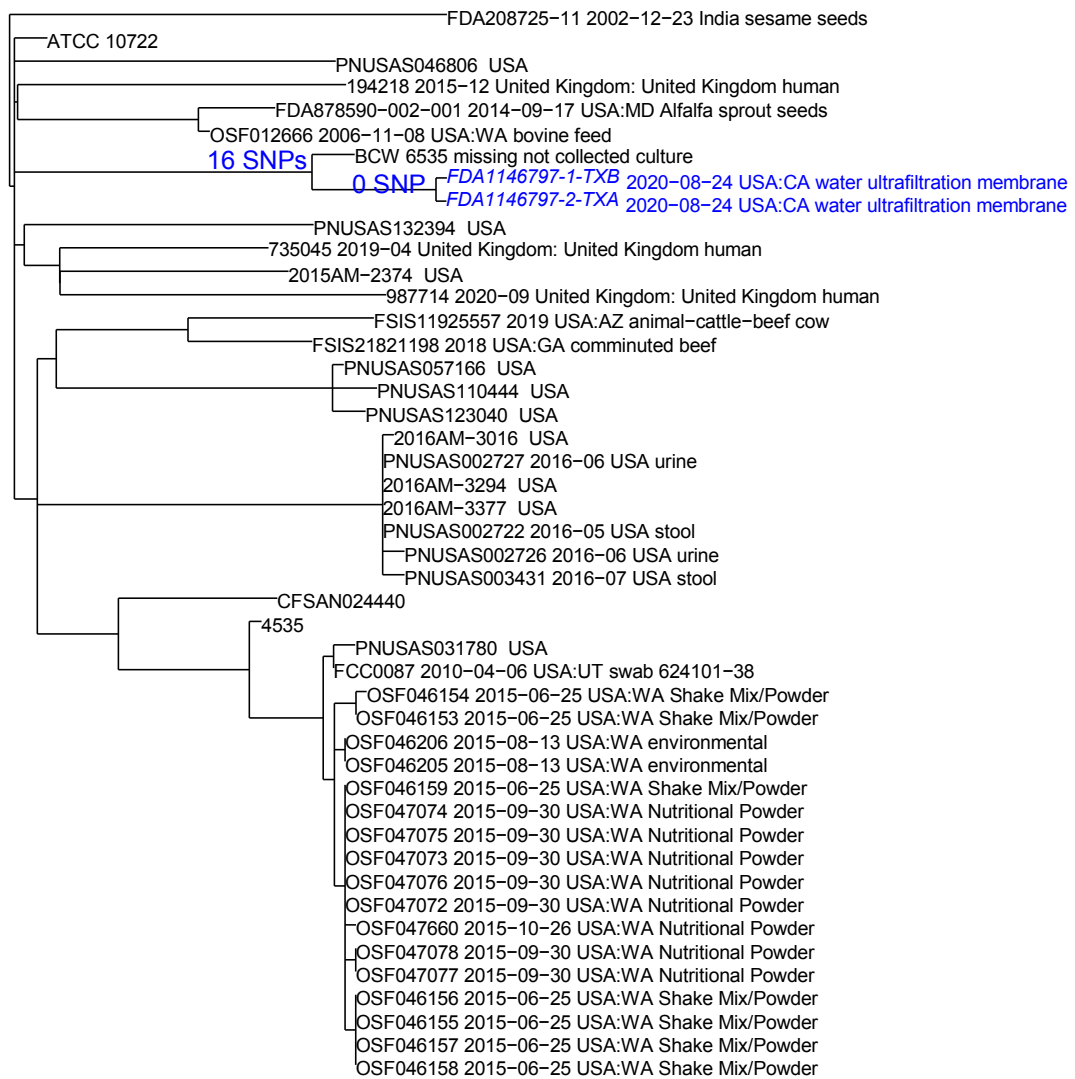
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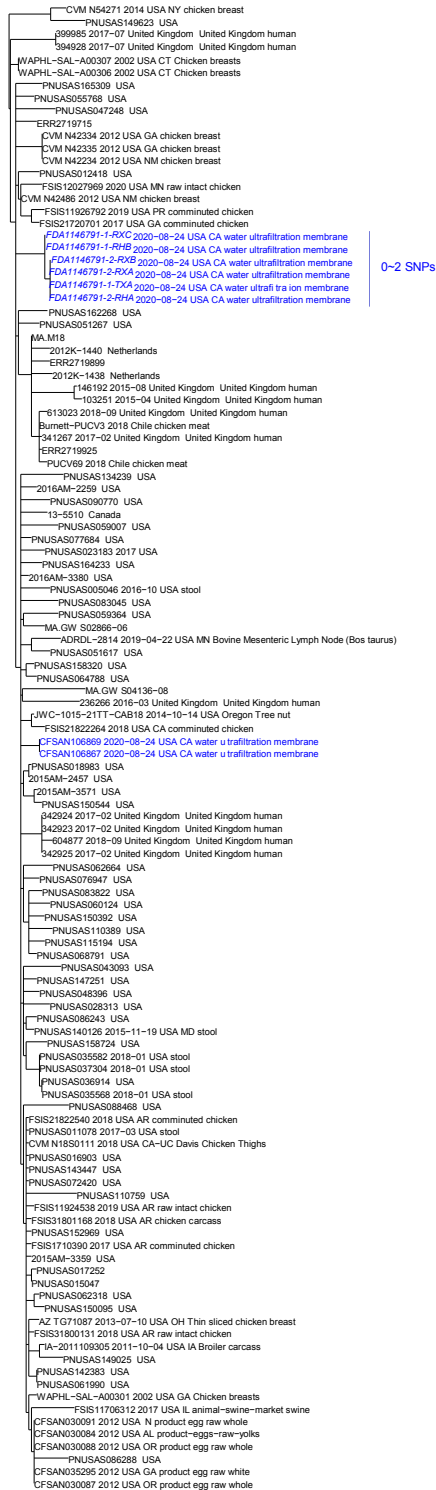
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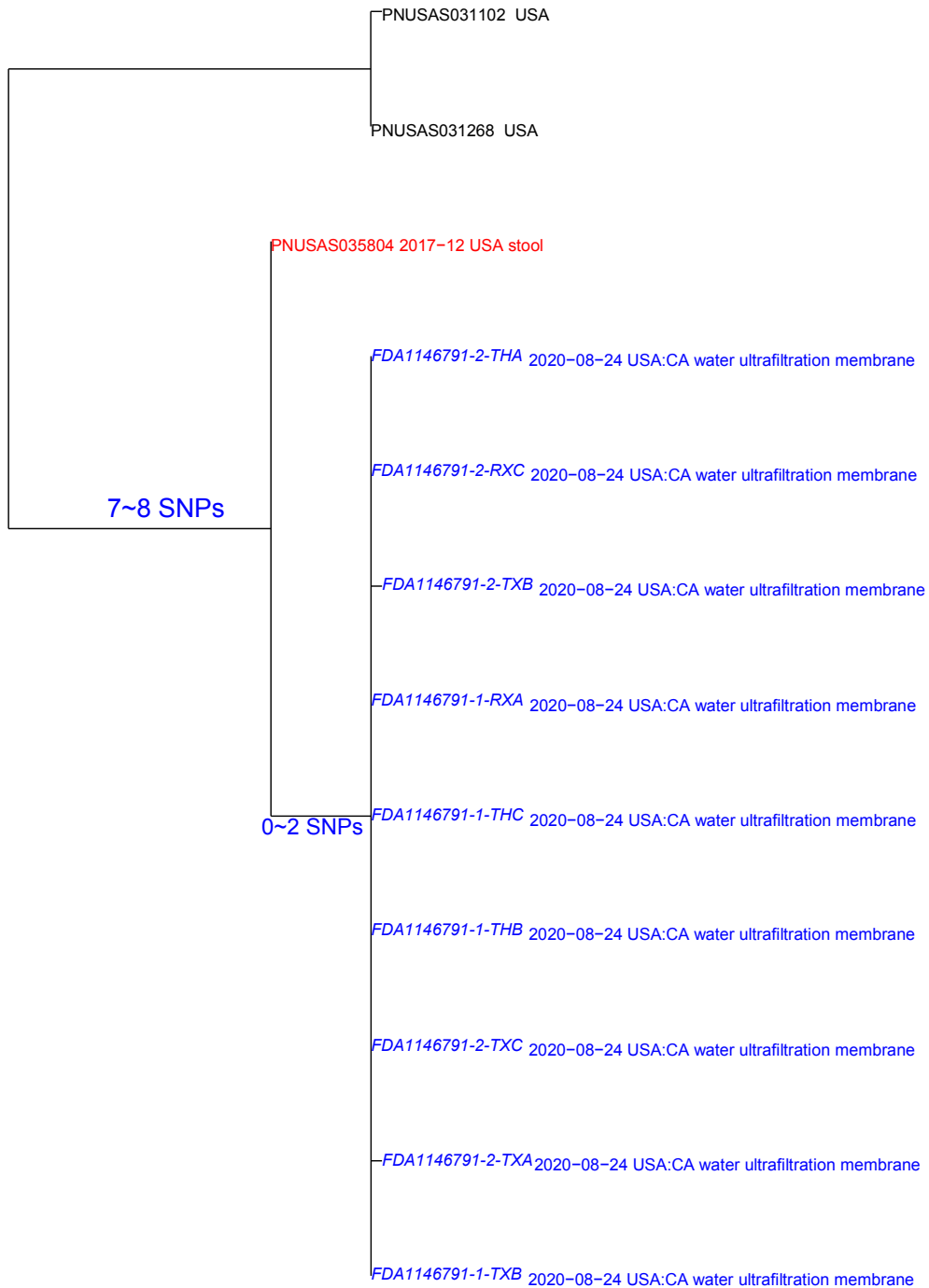
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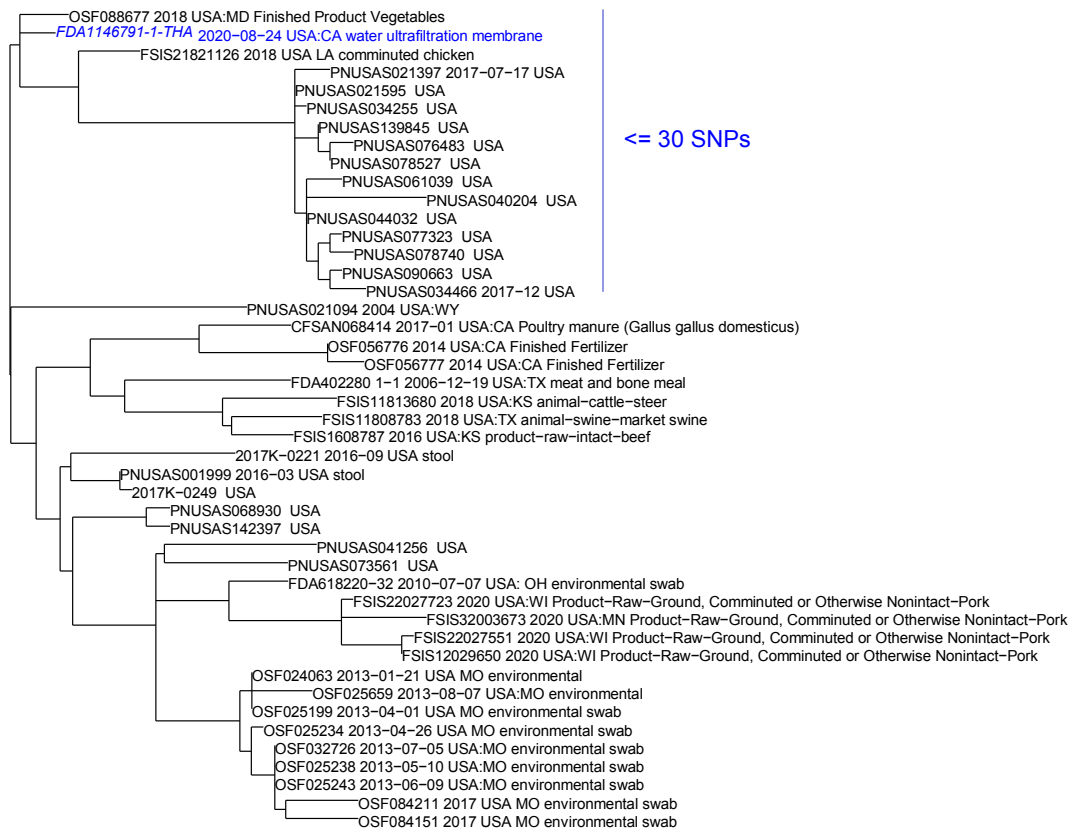
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Report_SalThomson_clust14_200921

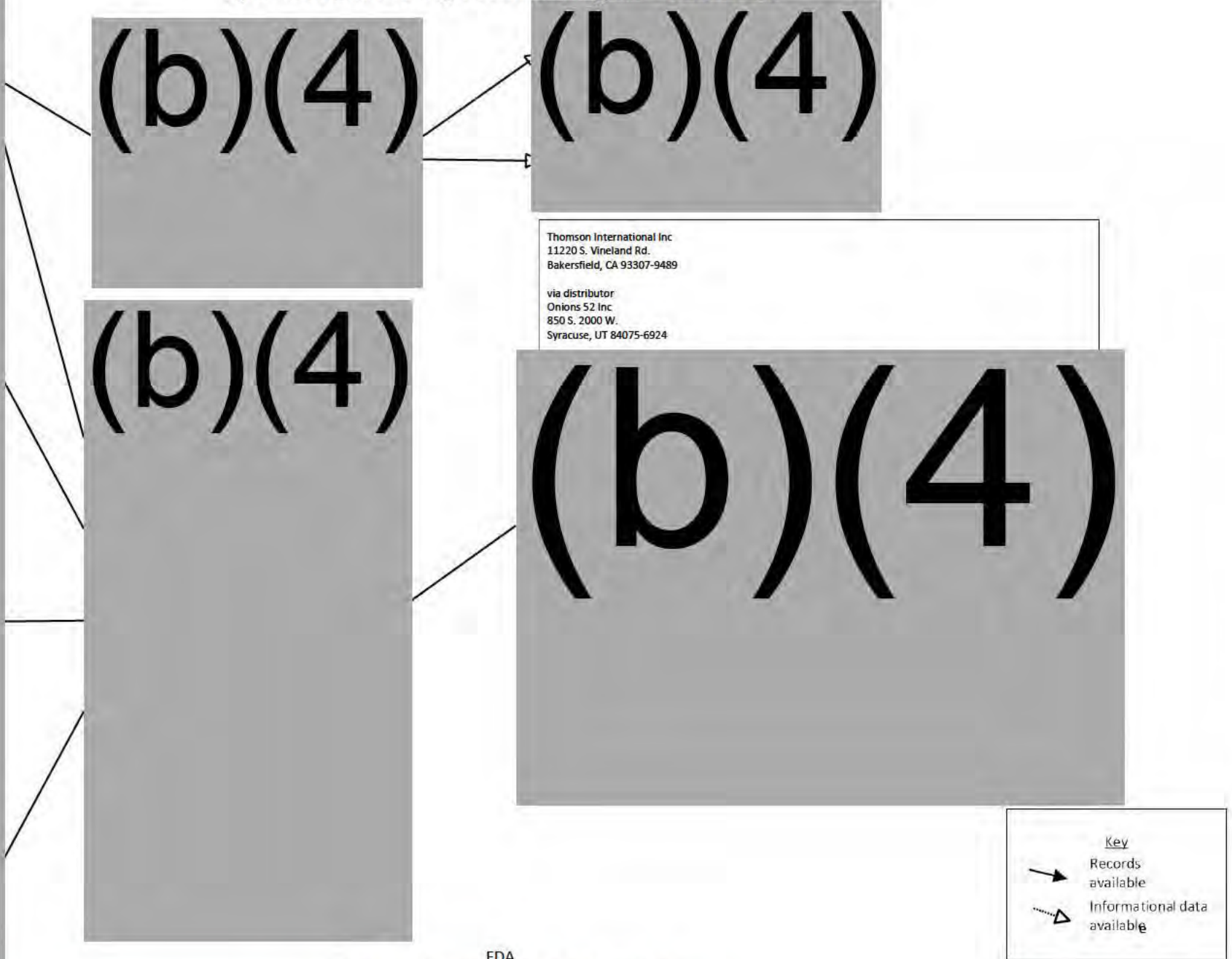


Report_SalThomson_clust16_200921



(b)(4)

Sysco Montana POS Leg Traceback Diagram – Red Onions



FDA

Coordinated Outbreak Response and Evaluation

[Date Created: 07/21/2020; Date Finalized: 08/24/2020]

Sysco Portland POS Leg Traceback Diagram – Red Onions

(b)(4)

(b)(4)

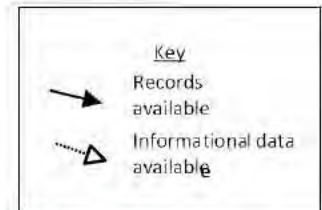
(b)(4)

Thomson International Inc
11220 S. Vineland Rd.
Bakersfield, CA 93307-9489

via distributor
Onions 52 Inc
850 S. 2000 W.
Syracuse, UT 84075-6924

(b)(4)

(b)(4)



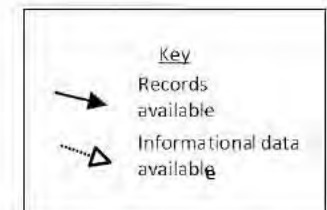
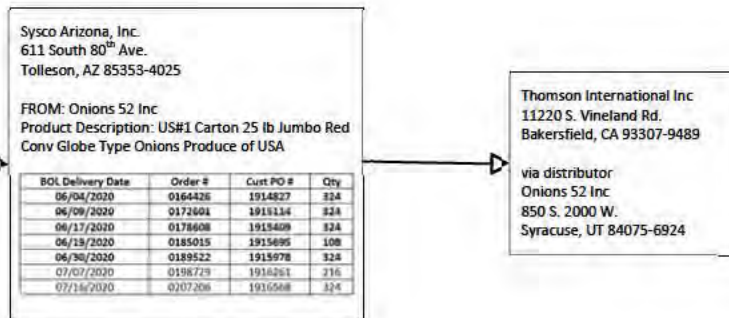
FDA

Coordinated Outbreak Response and Evaluation

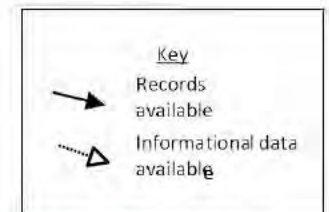
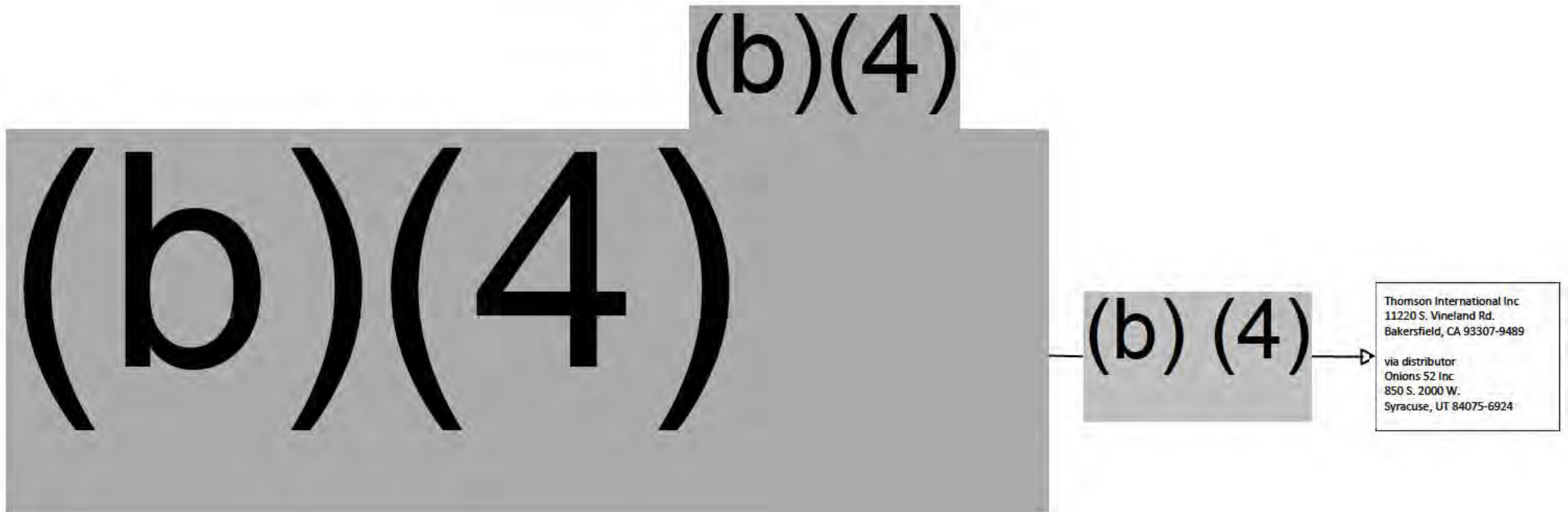
[Date Created: 07/21/2020; Date Finalized: 08/06/2020]

Salmonella Newport Multi-State Outbreak July 2020
Sysco Arizona POS Leg Traceback Diagram – Red Onions

(b)(4)



Salmonella Newport Multi-State Outbreak July 2020
Pat's Select Pizza and Grill Leg Traceback Diagram – Red Onions



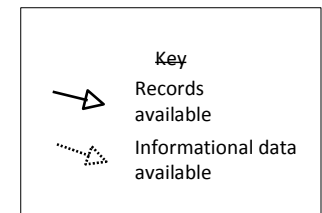
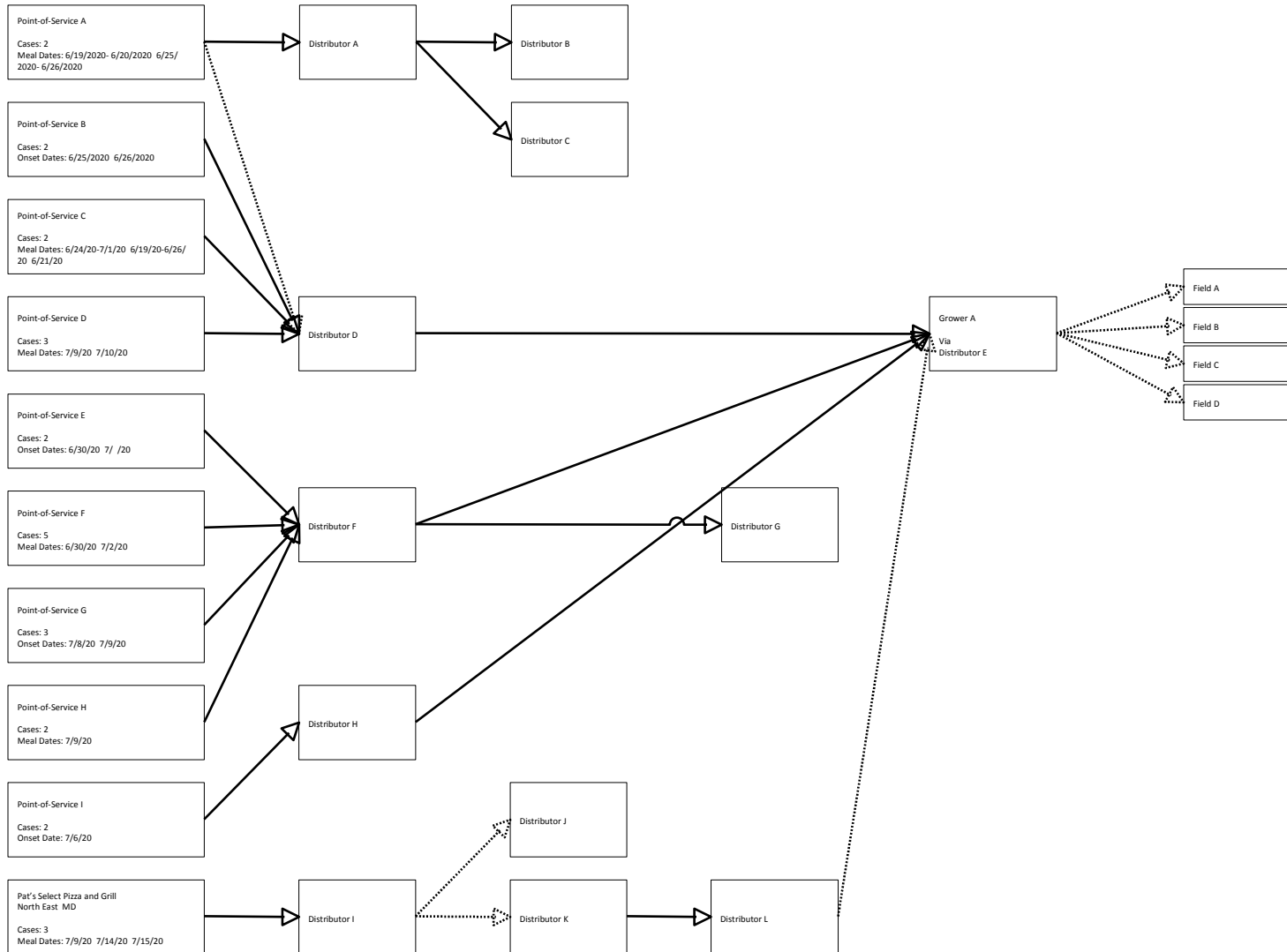
FDA

Coordinated Outbreak Response and Evaluation

[Date Created: 08/26/2020; Date Finalized: 08/28/2020]

Salmonella Newport Multi-state Outbreak July 2020

Master Traceback Diagram – Red Onions



FDA

Coordinated Outbreak Response and Evaluation

[Date Created: 07/21/2020; Date Finalized: 08/28/2020]

Producers (Left Column):

- Spokane Produce, Spokane, WA
- Fresh Point Vancouver, Vancouver, BC
- Onions 32, Syracuse, UT
- Rainfield Marketing, Vernon, CA
- Western Veg, Bakersfield, CA
- West Coast Produce, Oakland, CA
- Emerald Fruit and Produce, Eugene, OR
- Sewa Enterprise, Delta, BC
- Fruiticana Produce, Surrey, BC
- Persia Foods, Vancouver, BC
- Southern Produce, Winnipeg, MB
- Sesui Trading, Santa Fe Springs, CA
- KOR Produce, Elyria, PA

Central Node: Thomson International Inc., Bakersfield, CA

Key:

- Records available (solid line)
- Informational data available (dotted line)

Redactions: Large grey blocks and the text "(b)(4)" are used to redact sensitive information throughout the diagram.

Coordinated Outbreak Response and Evaluation

This report contains confidential/commercial information and may not be further distributed beyond its intended FDA audience without express permission from FDA.

EXHIBIT 3

Simone Stampfer

From: Helen Chen
Sent: Monday, June 5, 2023 12:26 PM
To: Simone Stampfer; Patricia Chavez
Subject: FW: Your FOIA Request 2023-4418

Pls. upload and email.

Sincerely,

Helen Chen
Greenan Peffer Sallander & Lally LLP
2000 Crow Canyon Place, Suite 380 | San Ramon, CA 94583
| Direct: 925.498.2404 | Fax: 925.830.8787

Website: www.gpsllp.com | Email: hchen@gpsllp.com

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From: Wilde, Samantha <Samantha.Wilde@fda.hhs.gov>
Sent: Friday, June 2, 2023 11:28 AM
To: Helen Chen <hchen@gpsllp.com>
Cc: Jones, Kimberly (CFSAN) <Kimberly.Jones@fda.hhs.gov>; Rennie, Chalmer <Chalmer.Rennie@fda.hhs.gov>
Subject: Your FOIA Request 2023-4418

Attention: Helen Chen

This email is in regards to your Freedom of Information Act request, dated May 24, 2023, submitted to the Food and Drug Administration (FDA), assigned to Center for Food Safety and Applied Nutrition (CFSAN) seeking:

- All publicly-available records relating to any reported illness of John Kahlie, including but not limited to correspondence, investigative reports, medical records, laboratory test results, epidemiological records and Whole Genomic Sequencing ("WGS") ID related to John Kahlie. 2. All records relating to your investigation of Thomson as a potential source of Salmonella Newport outbreak in 2020." 3. All records relating to the WGS of Salmonella Newport outbreak in 2020. 4. All records detailing potential sources of Salmonella Newport outbreak in 2020. 5. All records detailing potential sources of Salmonella Newport outbreak tied to onions in 2020. 6. All of your traceback records relating to the Salmonella Newport outbreak in 2020. 7. All records detailing your investigative procedures for identifying sources of foodborne illnesses reported to you that were used to identify the source of foodborne illnesses reported in 2020. 8. All records relating to efforts to continue investigating foodborne illnesses after a potential source is identified that were part of your procedures for foodborne illness outbreaks in 2020.

A portion of your records can be found on FDA.gov at the link here: [CFSAN FOIA Electronic Reading Room](https://www.fda.gov/oc/foia/CFSAN_FOIA_Electronic_Reading_Room) | [FDA](https://www.fda.gov/oc/foia/CFSAN_FOIA_Electronic_Reading_Room) under CFSAN Electronic Reading Room Postings, Posted 2023, in which you will find responsive records here: <https://www.fda.gov/media/166751/download#10408>

Your request is granted in part. After a thorough review of the responsive records, we have determined that portions of the documents are exempt from disclosure under FOIA exemptions (b)(4) and (b)(5) of the FOIA 5 U.S.C. § 552, as amended and delineated below:

- Exemption (b)(4) protects from disclosure “trade secrets” (TS) and “commercial confidential information” (CCI) or financial information that was obtained from a person outside the government and that is privileged or confidential.
- The FOIA exemption (b)(5) permits the withholding of inter-agency or intra-agency communications records which are part of the deliberative process and pre-decisional. Disclosure of such material could inhibit the open and candid expression of opinions and diminish the quality of the decision-making process.

In determining to withhold such information, FDA considered 5 USC 552(a)(8)(i), when applicable, and whether FDA reasonably foresees that disclosure of such information would harm an interest protected by the relevant exemption(s) and whether disclosure is prohibited by law.

CFSAN is responding with records only to items #1-8 of your request. CFSAN conducted a search for item #1 and was unable to locate any records responsive to that item. Therefore, CFSAN considers your request closed. This response does not constitute a final agency action, please be advised that your request has been assigned to one or more FDA components that will reply directly to you with any responsive records in their purview.

You have the right to appeal this determination. By filing an appeal, you preserve your rights under FOIA and give the agency a chance to review and reconsider your request and the agency’s decision. Your appeal must be mailed within 90 days from the date of this response, to: Director, Office of the Executive Secretariat, US Food & Drug Administration, 5630 Fishers Lane, Room 1050, Rockville, MD 20857, E-mail: FDAFOIA@fda.hhs.gov. Please clearly mark both the envelope and your letter “FDA Freedom of Information Act Appeal.”

If you would like to discuss our response before filing an appeal to attempt to resolve your dispute without going through the appeals process, please contact Kimberly.Jones@fda.hhs.gov or by telephone 240-402-1825. You may also contact the FDA FOIA Public Liaison for assistance at: Office of the Executive Secretariat, US Food & Drug Administration, 5630 Fishers Lane, Room 1050, Rockville, MD 20857, E-mail: FDAFOIA@fda.hhs.gov.

If you are unable to resolve your FOIA dispute through our FOIA Public Liaison, the Office of Government Information Services (OGIS), the Federal FOIA Ombudsman’s office, offers mediation services to help resolve disputes between FOIA requesters and Federal agencies. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road–OGIS, College Park, MD 20740-6001; telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769; e-mail at ogis@nara.gov.

Please do not submit payment until you receive an invoice. The following charges for this request to date may be included in a monthly invoice:

Reproduction \$0.00 Search \$0.00 Review \$0.00 Other \$0.00 Total \$0.00

Sincerely,

Samantha Wilde

Samantha Wilde

Government Information Specialist

Center for Food Safety and Applied Nutrition (CFSAN)

Office of Regulations and Policy

U.S. Food and Drug Administration (FDA)

Tel: 240-402-0003

samantha.wilde@fda.hhs.gov



EXHIBIT 4

From: Vidanes, Jeff@CDPH <Jeff.Vidanes@cdph.ca.gov>

Sent: Tuesday, July 28, 2020 8:47 AM

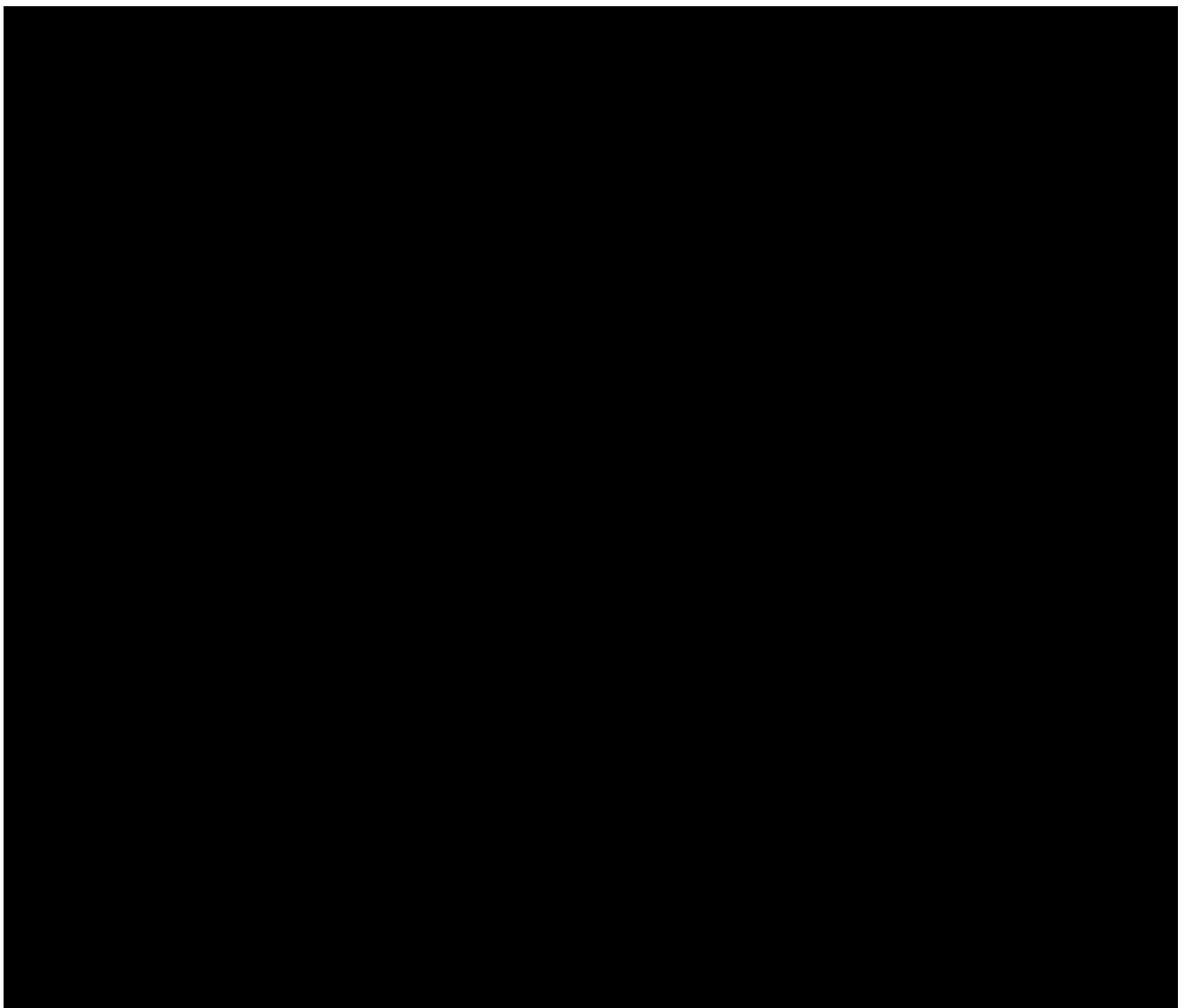
To: [REDACTED] StateRFR-Needham, Michael
<Michael.Needham@cdph.ca.gov>; Adcock, Brandon@CDPH <Brandon.Adcock@cdph.ca.gov>

Cc: [REDACTED]

Subject: RE: CRT3 - Updates from CA clusters and Need for Assignment to [REDACTED]
Salmonella Newport/Unknown/Jul 2020

Hi Nicole,

We expanded our investigation to include tomatoes and onions, in addition to cilantro. All of the 22 cilantro samples that we collected from retail last week tested negative for Salmonella.



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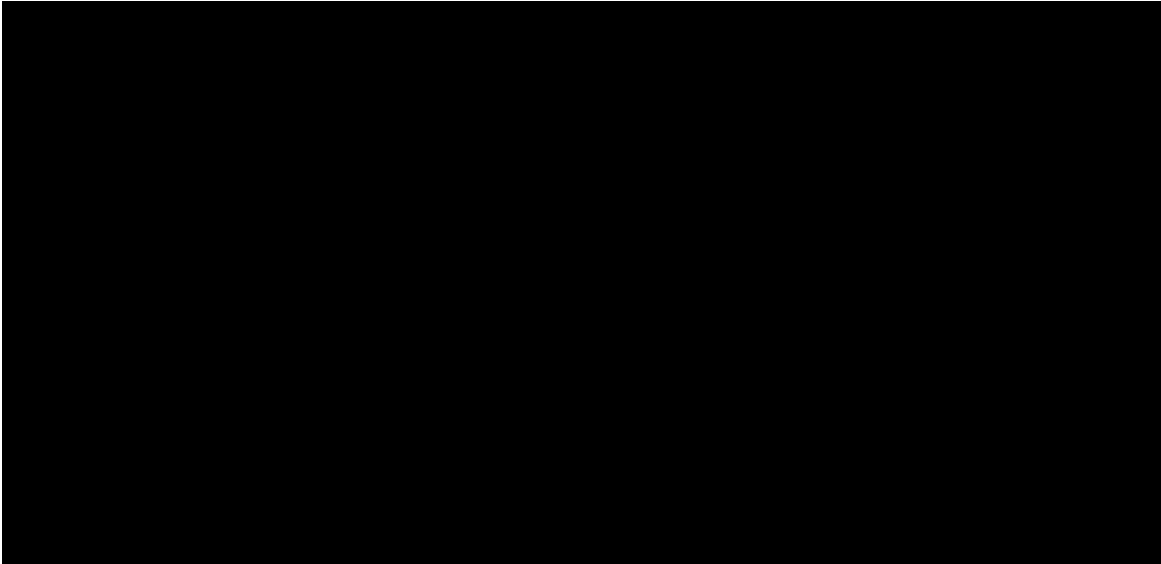
[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]



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